3. Media

Cell Culture Media

Cell Specific Media

PAN™ BIOTECH GmbH

Introduction

You only want Highest-Quality Media for Cell Cultivation?

At PAN-Biotech, perfect raw materials and state-of-the-art technologies guarantee first-class quality of the media.

Water is the most important component of liquid media, which is why water purity is of outstanding importance for the quality of media. The water we use generally has an Endotoxin level of < 0,005 EU/ml, and therefore is of highest purity.

Our media are placed in quarantine until quality control procedures are finished. This guarantees the product's excellent quality.

Advantages of our Cell Culture Media

- Used base materials are tested according to the highest possible quality standards.
- Standard filling in high-class Nalge-PET bottles.
- Batches of 10 liter to 4000 liter.
- Service: Product optimisation/further development regarding the use and objective target of the custom.
- CE-labelling after the medicine-product-law on request possible.

Media with extraordinary Formulation

If you need a media formulation, which is not noted in our product catalogue or noted as special media, please contact us. From a minimum order quantity of 20 x 500 ml we can produce every variant media formulation. In the annex at the end of this catalogue you can find the „Customs Product Request Form"; you can fill out and fax us!

Delivery Time

Standard media: Basically within 3 work days in Germany, otherwise we will inform you.
Special media and customs products: Within Germany in 4-6 weeks after order receipt.

Shelf Life

Powder media:	2 years
Liquid media without Glutamine:	2 years
Liquid media with stab.Glutamine:	2 years
Liquid media with L-Glutamine:	1 year

Liquid media with L-Glutamine can be used also after the expiry date, but must be supplemented with new L-Glutamine. Shelf life starts on date of production!

Storage

Powder media:	+ 2 °C to + 8 °C
Liquid media:	+ 2 °C to + 8 °C, protected from light

Benefit from the experience and know-how of PAN-Biotech GmbH. Our state-of-the-art production facilities, with a production line specifically installed for these requirements, allow us to produce the formulations especially developed for your needs in constant high quality also for longer periods of time, and to make batch sizes adapted to your need. Our scientific service will be happy to advise you regarding your individual formulations!

For further information about the dependence of ph-values in media on CO_2 concentration in the incubator please refer to our website www.pan-biotech.de.

Alpha MEM

Description

Alpha MEM is a different formulation of the MEM Eagle and contains a higher concentration of amino acids. It also has a higher concentration of lipon acid, vitamines and pyruvate. Primarily it was developed for the cultivation of hamster kidney cells, but today it is used for a broad range of mammalian cells.

Among others the Alpha MEM panders the growth and progeny of bone marrow cells in suspension culture and monolayer. A further possibility is the use as a separation medium or for the outbreeding of amnio cells.

Liquid Media

Alpha MEM Eagle without L-Glutamine without Ribonucleosides without Deoxyribonucleosides with 2,2 g/l $NaHCO_3$	500 ml	P04-21050
Alpha MEM Eagle without L-Glutamine with Ribonucleosides with Deoxyribonucleosides with 2,2 g/l $NaHCO_3$	500 ml	P04-21150

Alpha MEM

Alpha MEM Eagle with L-Glutamine without Ribonucleosides without Deoxyribonucleosides with 2,2 g/l $NaHCO_3$	500 ml	P04-21060	Alpha MEM Eagle with L-Glutamine with Ribonucleosides with Deoxyribonucleosides with 2,2 g/l $NaHCO_3$	500 ml	P04-21500
Alpha MEM Eagle with stab. Glutamine without Ribonucleosids without Deoxyribonucleosids with 2,2 g/l $NaHCO_3$	500 ml	P04-21350	Alpha MEM Eagle with stab. Glutamine with Ribonucleosides with Deoxyribonucleosides with 2,2 g/l $NaHCO_3$	500 ml	P04-21250

Special Media

Minimum order quantity: 20 x 500 ml

Alpha MEM Eagle **with 4 mM L-Glutamine** with Ribonucleosides with Deoxyribonucleosides with 2,2 g/l $NaHCO_3$	500 ml	P04-21550	Alpha MEM Eagle with L-Glutamine **without Glucose** with Ribonucleosides with Deoxyribonucleosides with 2,2 g/l $NaHCO_3$	500 ml	P04-21502
Alpha MEM Eagle with L-Glutamine **with 10 mM Glucose** with Ribonucleosides with Deoxyribonucleosides with 2,2 g/l $NaHCO_3$	500 ml	P04-21550	Alpha MEM Eagle without Glutamine **without Phenol red** without Ribonucleosides without Deoxyribonucleosides with 2,2 g/l $NaHCO_3$	500 ml	P04-21051

Powder Media

Alpha MEM Eagle without L-Glutamine with Ribonucleosides with Deoxyribonucleosides without $NaHCO_3$	10 L 50 L	P03-2410 P03-2450	Alpha MEM Eagle with L-Glutamine without Ribonucleosides without Deoxyribonucleosides without $NaHCO_3$	10 L 50 L	P03-2310 P03-2350
Alpha MEM Eagle with L-Glutamine with Ribonucleosides with Deoxyribonucleosides without NaHCO3	10 L 50 L	P03-2510 P03-2550	Alpha MEM Eagle with L-Glutamine with 25 mM Hepes with Ribonucleosides with Deoxyribonucleosides without $NaHCO_3$	10 L 50 L	P03-2610 P03-2650

Composition

	Components	mg/L	Components	mg/L
Inorganic Salts	Calcium chloride x $2H_2O$	264,92	Sodium chloride	6800,00
	Magnesium sulfate dried	139,52	Sodium dihydrogen phosphate x H_2O	140,00
	Potassium chloride	400,00		

continue →

Each formulation possible

PAN™ BIOTECH GmbH

Alpha MEM

	Components	mg/L	Components	mg/L
Other Components	D(+)-Glucose anhydrous	1000,00	Phenol red	10,00
	Hepes	5958,00	Sodium pyruvate	110,00
	Lipoic acid	0,20		
Amino acids	L-Alanine	25,00	L-Leucine	52,40
	L-Arginine x HCl	126,64	L-Lysine x HCl	72,47
	L-Asparagine x H_2O	50,00	L-Methionine	15,00
	L-Aspartic acid	30,00	L-Phenylalanine	32,00
	L-Cysteine x HCl x H_2O	100,00	L-Proline	40,00
	L-Cystine	24,00	L-Serine	25,00
	L-Glutamine	292,00	L-Threonine	48,00
	L-Glutamic acid	75,00	L-Tryptophan	10,00
	Glycine	50,00	L-Tyrosine	36,20
	L-Histidine x HCl x H_2O	42,00	L-Valine	46,00
	L-Isoleucine	52,40		
Vitamins	L-Ascorbic acid	50,00	Nicotinamide	1,00
	D(+)-Biotin	0,10	Pyridoxal x HCl	1,00
	D-Calcium pantothenate	1,00	Riboflavin	0,10
	Choline chloride	1,00	Thiamine x HCl	1,00
	Folic acid	1,00	Vitamin B_{12}	1,33
	myo-Inositol	2,00		
Ribonucleosides	Adenosine	10,00	Guanosine	10,00
	Cytidine	10,00	Uridine	10,00
Deoxyribonucleosides	2'-Deoxyadenosine x H_2O	10,00	2'-Deoxyguanosine	10,00
	2'-Deoxycytidine x HCl	11,00	2'-Deoxythymidine	10,00

When 5958,00 mg/l Hepes are included there are only 6300 mg /l Sodium chloride.

Schedule

	L-Glutamine	Stab. Glutamine	Ribonucleosides	Desoxyribonucleosides	Special
21050					
21060	X				
21150			X	X	
21250		X	X	X	
21350		X			
21500	X		X	X	
21550	X		X	X	See above
21501	X		X	X	See above
21502	X		X	X	See above
21051					See above

BME with Earle's Salts

Description

In the fifties of the last century it became clear, that mammalian cells need not only the 10 essential amino acids, but also Cystine, Tyrosine and Glutamine. In addition to this three amino acids BME include also eight B-vitamins. Originally BME was used for the cultivation of murine Lcell and Hela-cells. With its many variations it is used in many fields of science today. Along with the cultivation of normal mammalian cells BME is very suitable for transformed cells.

Liquid Media

BME with EBSS without L-Glutamine with 2,2 g/l $NaHCO_3$	500 ml	P04-25050
BME with EBSS with L-Glutamine with 2,2 g/l $NaHCO_3$	500 ml	P04-25500

Powder Media

BME with EBSS without L-Glutamine without $NaHCO_3$	10 L 50 L	P03-5610 P03-5650
BME with EBSS with L-Glutamine without $NaHCO_3$	10 L 50 L	P03-0110 P03-0150
BME with EBSS without L-Glutamine with 25 mM Hepes without $NaHCO_3$	10 L 50 L	P03-5710 P03-5750
BME with EBSS with L-Glutamine with 25 mM Hepes without $NaHCO_3$	10 L 50 L	P03-0210 P03-0250

Composition

	Components	mg/L
Inorganic Salts	Calcium chloride x $2H_2O$	264,92
	Magnesium sulfate dried	139,52
	Potassium chloride	400,00
	Sodium chloride	6800,00
	Sodium dihydrogen phosphate x H_2O	140,00
Other Compo-nents	D(+)-Glucose anhydrous	1000,00
	Hepes	5958,00
	Phenol red	10,00
Amino acids	L-Arginine x HCl	21,00
	L-Cystine	12,00
	L-Glutamine	292,00
	L-Histidine Base	8,00
	L-Isoleucine	26,00
	L-Leucine	26,00
	L-Lysine x HCl	36,47
	L-Methionine	7,50
	L-Phenylalanine	16,50
	L-Threonine	24,00
	L-Tryptophan	4,00
	L-Tyrosine	18,00
	L-Valine	23,50
Vitamins	D(+)-Biotin	1,00
	D-Calcium pantothenate	1,00
	Choline chloride	1,00
	Folic acid	1,00
	myo-Inositol	2,00
	Nicotinamide	1,00
	Pyridoxal x HCl	1,00
	Riboflavin	0,10
	Thiamine x HCl	1,00

When 5958,00 mg/l Hepes are included there are only 6300 mg /l Sodium chloride.

Schedule

	L-Glutamine	Stab. Glutamine	Phenolred	Hepes	Special
25050			X		
25500	X		X		

Each formulation possible

BME with Hank's Salts

Liquid Media

BME with HBSS without L-Glutamine with 0,35 g/l $NaHCO_3$	500 ml	P04-26050
BME with HBSS with L-Glutamine with 0,35 g/l $NaHCO_3$	500 ml	P04-26500

Powder Media

BME with HBSS without L-Glutamine without $NaHCO_3$	10 L 50 L	P03-5810 P03-5850
BME with HBSS with L-Glutamine without $NaHCO_3$	10 L 50 L	P03-0310 P03-0350
BME with HBSS without L-Glutamine with 25 mM Hepes without $NaHCO_3$	10 L 50 L	P03-0410 P03-0450
BME with HBSS with L-Glutamine with 25 mM Hepes without $NaHCO_3$	10 L 50 L	P03-5910 P03-5950

Composition

	Components	mg/L
Inorganic Salts	Calcium chloride x $2H_2O$	185,44
	Magnesium sulfate dried	139,52
	Potassium chloride	400,00
	Potassium dihydrogen phosphate anhydrous	60,00
	Sodium chloride	8000,00
	di-Sodium hydrogen phosphate	47,88
Other Compo-nents	D(+)-Glucose anhydrous	1000,00
	Hepes	5958,00
	Phenol red	10,00
Amino acids	L-Arginine x HCl	21,00
	L-Cystine	12,00
	L-Glutamine	292,00
	L-Histidine Base	8,00
	L-Isoleucine	26,00
	L-Leucine	26,00
	L-Lysine x HCl	36,47
	L-Methionine	7,50
	L-Phenylalanine	16,50
	L-Threonine	24,00
	L-Tryptophan	4,00
	L-Tyrosine	18,00
	L-Valine	23,50
Vitamins	D(+)-Biotin	1,00
	D-Calcium pantothenate	1,00
	Choline chloride	1,00
	Folic acid	1,00
	myo-Inositol	2,00
	Nicotinamide	1,00
	Pyridoxal x HCl	1,00
	Riboflavin	0,10
	Thiamine x HCl	1,00

When 5958,00 mg/l Hepes are included there are only 7500 mg /l Sodium chloride.

BSK-H Medium

Description

Microbiological Medium for the cultivation of Borrelia burgdorferi.

Liquid Media

BSK-H Medium without L-Glutamine with 2,2 g/l $NaHCO_3$	500 ml	P04-25300
BSK-H Medium without L-Glutamine **with 6 % rabbit serum** with 2,2 g/l $NaHCO_3$	500 ml	P04-25300S1

Each formulation possible

Click‘s Medium

Description

Click‘s medium is a modification of Eagle's Essential medium with Hank's salts (HMEM). This medium contains higher concentrations of essential amino acids, the addition of non-essential amino acid, sodium pyruvate and Nucleic acid precursors.

Liquid Media

Click’s Medium with L-Glutamine with 1,35 g/l $NaHCO_3$	500 ml	P04-16999

Powder Media

Click’s Medium with L-Glutamine without $NaHCO_3$	10 L 50 L	P03-8910 P03-8950

CMRL-1066 Medium

Description

The CMRL is a Nucleosid- and Vitamin-rich Medium. In the past it was developed to clone monkey-kidney cells and as long time culture medium for L-cells. It is suitable for many types of human and monkey cells and also for other mammalian cells, especially by using horse and calf serum.

Liquid Media

CMRL – 1066 without L-Glutamine without Phenol red with 2,2 g/l $NaHCO_3$	500 ml	P04-84600
CMRL – 1066 with L-Glutamine without Phenol red with 2,2 g/l $NaHCO_3$	500 ml	P04-84500

Composition

	Components	mg/L	Components	mg/L
Inorganic Salts	Calcium chloride x $2H_2O$	264,92	Sodium acetate x $3H_2O$	83,00
	Potassium chloride	400,00	Sodium chloride	6799,00
	Magnesium anhydros	97,78	di-Sodium hydrogen phosphate x $2H_2O$	139,75
Other Compo-nents	Cholesterol	0,20	5-Methyldeoxycytidine	0,10
	D(+)-Glucose anhydrous	1000,00	Sodium glucuronate x H_2O	4,00
	Glutathione (red.)	10,00	Tween 80	5,00
Coenzyme	Cocarboxylase x HCl	1,00	NAD	7,00
	Coenzym A Trilithiumsalt x $2H_2O$	2,67	NADP	1,00
	FAD	1,00	UTP	1,00
Amino acids	L-Alanine	25,00	L-Leucine	60,00
	L-Arginine x HCl	70,00	L-Lysine x HCl	70,00
	L-Aspartic acid	30,00	L-Methionine	15,00
	L-Cysteine free base	199,66	L-Phenylalanine	25,00
	L-Cystine	20,00	L-Proline	40,00
	L-Glutamine	100,00	L-Serine	25,00
	L-Glutamic acid	75,00	L-Threonine	30,00
	Glycine	50,00	L-Tryptophan	10,00
	L-Histidine x HCl x H_2O	20,00	L-Tyrosine	40,00
	L-Hydroxyproline	10,00	L-Valine	25,00
	L-Isoleucine	20,00		
Vitamins	p-Aminobenzioc acid	0,05	Nicotinic acid	0,025
	L-Ascorbin acid	50,00	Nicotinamide	0,025
	D(+)-Biotine	0,01	Pyridoxal x HCl	0,025
	D-Calcium pantothenate	0,01	Pyridoxide x HCl	0,025
	Choline chloride	0,50	Riboflavin	0,01
	Folic acid	0,01	Thiamine x HCl	0,01
	myo-Inositol	0,05		
Deoxyribo-nucleo-sides	2´- Deoxyadenosine	10,00	2´- Deoxyguanosine	10,00
	2´- Deoxycytidine x HCl	11,60	2´- Deoxythymidine	10,00

Dulbecco's Modified Eagle Medium

Description

Intrinsically developed for the cultivation of murine embryonic cells, the DMEM is tailor-made for the cultivation of a broad range of cells, especially if the media is supplemented with FBS. DMEM is an Ealge Medium modification with the four-fold content of amino acids and vitamins. DMEM with 1.0 g/l Glucose is the standard media, whereas DMEM with 4.5 g/l Glucose is for cells which has a high energy demand.

Liquid Media without Glucose

DMEM without Glucose without L-Glutamine without Sodium pyruvate with 3,7 g/l $NaHCO_3$	500 ml	P04-01548S1
DMEM without Glucose without L-Glutamine with Sodium pyruvate with 3,7 g/l $NaHCO_3$	500 ml	P04-01549
DMEM without Glucose with L-Glutamine without Sodium pyruvate with 3,7 g/l $NaHCO_3$	500 ml	P04-01506
DMEM without Glucose with L-Glutamine with Sodium pyruvate with 3,7 g/l $NaHCO_3$	500 ml	P04-01551
DMEM without Glucose without L-Glutamine without Sodium pyruvate without Phenol red with 3,7 g/l $NaHCO_3$	500 ml	P04-01548

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Powder Media

DMEM without Glucose without L-Glutamine without Sodium pyruvate without Phenol red without $NaHCO_3$	10 L 50 L	P03-0010 P03-0050

Liquid Media with 1,0 g/l Glucose

DMEM with 1,0 g/l Glucose without L-Glutamine with Sodium pyruvate with 3,7 g/l $NaHCO_3$	500 ml	P04-01500
DMEM with 1,0 g/l Glucose with L-Glutamine with Sodium pyruvate with 3,7 g/l $NaHCO_3$	500 ml	P04-01550
DMEM with 1,0 g/l Glucose with stab. Glutamine with Sodium pyruvate with 3,7 g/l $NaHCO_3$	500 ml	P04-02500
DMEM with 1,0 g/l Glucose with stab. Glutamine with Sodium pyruvate without Phenol red with 3,7 g/l $NaHCO_3$	500 ml	P04-02500S1
DMEM with 1,0 g/l Glucose with L-Glutamine without Sodium pyruvate without Phenol red with 3,7 g/l $NaHCO_3$	500 ml	P04-01516
DMEM with 1,0 g/l Glucose without L-Glutamine with Sodium pyruvate with 25 mM Hepes with 3,7 g/l $NaHCO_3$	500 ml	P04-01250

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Dulbecco's Modified Eagle Medium

DMEM with 1,0 g/l Glucose without L-Glutamine without Sodium pyruvate without Phenol red with 3,7 g/l $NaHCO_3$	500ml	P04-03556
DMEM with 1,0 g/l Glucose without L-Glutamine with Sodium pyruvate without Phenol red with 3,7 g/l $NaHCO_3$	500 ml	P04-01159
DMEM with 1,0 g/l Glucose with L-Glutamine with Sodium pyruvate without Phenol red with 3,7 g/l $NaHCO_3$	500 ml	P04-01515
DMEM with 1,0 g/l Glucose with L-Glutamine with 25 mM Hepes with Sodiumpyruvate with 3,7 g/l $NaHCO_3$	500 ml	P04-05551
DMEM with 1,0 g/l Glucose with L-Glutamine without Sodium pyruvate with 3,7 g/l $NaHCO_3$	500 ml	P04-01555

Liquid Media with 1,0 g/l Glucose

Minimum order quantity: 20 x 500 ml

DMEM with 1,0 g/l Glucose without L-Glutamine with Sodium pyruvate **without L-Isoleucine** with 3,7 g/l $NaHCO_3$	500 ml	P04-01160
DMEM with 1,0 g/l Glucose without L-Glutamine with Sodium pyruvate **without Calcium** with 3,7 g/l $NaHCO_3$	500 ml	P04-01501
DMEM with 1,0 g/l Glucose with L-Glutamine with Sodium pyruvate **without L-Serine** **without Choline chloride** with 3,7 g/l $NaHCO_3$	500 ml	P04-01550S1
DMEM with 1,0 g/l Glucose without L-Glutamine with Sodium pyruvate **without Phosphate** with 3,7 g/l $NaHCO_3$	500 ml	P04-01505
SILAC-DMEM with 1,0 g/l Glucose with stab. Glutamine with Sodium pyruvate **without L-Arginin** **without L-Lysin** with 3,7 g/l $NaHCO_3$	500 ml	P04-02501

Powder Media

DMEM with 1,0 g/l Glucose with L-Glutamine with Sodium pyruvate without $NaHCO_3$	10 L 50 L	P03-0510 P03-0550
DMEM with 1,0 g/l Glucose without L-Glutamine with Sodium pyruvate with 25 mM Hepes without $NaHCO_3$	10 L 50 L	P03-6410 P03-6450
DMEM with 1,0 g/l Glucose with L-Glutamine with Sodium pyruvate with 25 mM Hepes without $NaHCO_3$	10 L 50 L	P03-0610 P03-0650
DMEM with 1,0 g/l Glucose with L-Glutamine with Sodium pyruvate without Phenol red without $NaHCO_3$	10 L 50 L	P03-01510 P03-01550

Each formulation possible

PAN BIOTECH GmbH

Dulbecco's Modified Eagle Medium

Liquid Media with 4,5 g/l Glucose

DMEM with 4,5 g/l Glucose without L-Glutamine without Sodium pyruvate with 3,7 g/l $NaHCO_3$	500 ml	P04-03500
DMEM with 4,5 g/l Glucose without L-Glutamine with Sodium pyruvate with 3,7 g/l $NaHCO_3$	500 ml	P04-03600
DMEM with 4,5 g/l Glucose with L-Glutamine without Sodium pyruvate with 3,7 g/l $NaHCO_3$	500 ml	P04-03550
DMEM with 4,5 g/l Glucose with L-Glutamine with Sodium pyruvate with 3,7 g/l $NaHCO_3$	500 ml	P04-03590
DMEM with 4,5 g/l Glucose with stab. Glutamine without Sodium pyruvate with 3,7 g/l $NaHCO_3$	500 ml	P04-4550
DMEM with 4,5 g/l Glucose with stab. Glutamine with Sodium pyruvate with 3,7 g/l $NaHCO_3$	500 ml	P04-04510
DMEM with 4,5 g/l Glucose without L-Glutamine without Sodium pyruvate without Phenol red with 3,7 g/l $NaHCO_3$	500 ml	P04-01161
DMEM with 4,5 g/l Glucose without L-Glutamine with Sodium pyruvate without Phenol red with 3,7 g/l $NaHCO_3$	500 ml	P04-01158
DMEM with 4,5 g/l Glucose with L-Glutamine with Sodium pyruvate without Phenol red with 3,7 g/l $NaHCO_3$	500 ml	P04-03591
DMEM with 4,5 g/l Glucose with stab. Glutamine with Sodium pyruvate without Phenol red with 3,7 g/l $NaHCO_3$	500 ml	P04-03588
DMEM with 4,5 g/l Glucose without L-Glutamine with 25 mM Hepes with Sodium pyruvate with 3,7 g/l $NaHCO_3$	500 ml	P04-01597
DMEM with 4,5 g/l Glucose with L-Glutamine with 25 mM Hepes without Sodium pyruvate with 3,7 g/l $NaHCO3_3$	500 ml	P04-05540
DMEM with 4,5 g/l Glucose with L-Glutamine without Sodium pyruvate with 25 mM Hepes without Phenol red with 3,7 g/l $NaHCO_3$	500 ml	P04-05545
DMEM with 4,5 g/l Glucose with L-Glutamine with 25 mM Hepes with Sodium pyruvate with 3,7 g/l $NaHCO_3$	500 ml	P04-05550
DMEM with 4,5 g/l Glucose with stab. L-Glutamine with 25 mM Hepes without Sodium pyruvate with 3,7 g/l $NaHCO_3$	500 ml	P04-04550
DMEM with 4,5 g/l Glucose without L-Glutamine with Sodium pyruvate with 2,2 g/l $NaHCO_3$	500 ml	P04-03609

Dulbecco's Modified Eagle Medium

Special Media with 4,5 g/l Glucose

Minimum order quantity: 20 x 500 ml

DMEM with 4,5 g/l Glucose without L-Glutamine without Sodium pyruvate **without Calcium chloride** with 3,7 g/l $NaHCO_3$	500 ml	P04-03520
DMEM (10 x) with 4,5 g/l Glucose without L-Glutamine without Sodium pyruvate **with NEAA** without $NaHCO_3$	500 ml	P04-03510
DMEM with 4,5 g/l Glucose with stab. Glutamine **with 12,5 mM Hepes** with Sodium pyruvate without Phenol red with 3,7 g /l $NaHCO_3$	500 ml	P04-01162
DMEM with 4,5 g/l Glucose with L-Glutamine with Sodium pyruvate **without L-Arginine** with 3,7 g/l $NaHCO_3$	500 ml	P04-03598
DMEM with 4,5 g/l Glucose with L-Glutamine with 25 mM Hepes without Sodium pyruvate **with 2,2 g/l $NaHCO_3$**	500 ml	P04-04057
DMEM with 4,5 g/l Glucose without L-Glutamine without Sodium Pyruvate **without L-Cysteine** **without L-Methionine** with 3,7 g/l $NaHCO_3$	500 ml	P04-04055

DMEM with 4,5 g/l Glucose with L-Glutamine without Sodium pyruvate **without Natriumchloride** without $NaHCO_3$	500 ml	P04-03560
DMEM with 4,5 g/l Glucose with L-Glutamine with Sodium pyruvate **with 1,5 g/l $NaHCO_3$**	500 ml	P04-03596
DMEM **with 5,5 g/l Glucose** with L-Glutamine without Sodium pyruvate with 3,7 g/l $NaHCO_3$	500 ml	P04-03551
DMEM with 4,5 g/l Glucose with stab. Glutamine with Sodium pyruvate with 25 mM Hepes without Phenol red **with 0,5 g/l $NaHCO_3$**	500 ml	P04-01163
DMEM with 4,5 g/l Glucose without L-Glutamine without Sodium pyruvate **without L-Isoleucine** with 3,7 g/l $NaHCO_3$	500 ml	P04-03503

Powder Media

DMEM with 4,5 g/l Glucose without L-Glutamine without Sodium pyruvate without $NaHCO_3$	10 L 50 L	P03-6510 P03-6550
DMEM with 4,5 g/l Glucose with L-Glutamine without Sodium pyruvate without $NaHCO_3$	10 L 50 L	P03-0710 P03-0750
DMEM with 4,5 g/l Glucose with L-Glutamine with Sodium pyruvate without $NaHCO_3$	10 L 50 L	P03-0810 P03-0850

DMEM with 4,5 g/l Glucose without L-Glutamine without Sodium pyruvate with 25 mM Hepes without $NaHCO_3$	10 L 50 L	P03-6610 P03-6650
DMEM with 4,5 g/l Glucose with L-Glutamine without Sodium pyruvate with 25 mM Hepes without $NaHCO_3$	10 L 50 L	P03-0910 P03-0950
DMEM with 4,5 g/l Glucose with L-Glutamine with Sodium pyruvate with 25 mM Hepes without $NaHCO_3$	10 L 50 L	P03-1010 P03-1050

Each formulation possible

PAN BIOTECH GmbH

Dulbecco's Modified Eagle Medium

Composition

	Components	mg/L	Components	mg/L
Inorganic Salts	Calcium chloride anhydrous	200,00	Potassium chloride	400,00
	Iron (III) nitrate x $9H_2O$	0,10	Sodium chloride	6400,00
	Magnesium sulfate anhydrous	97,66	Sodium dihydrogen phosphate anhydrous	108,69
Other Components	D(+)-Glucose anhydrous	4500,00	Phenol red	15,00
	Hepes	5958,00	Sodium pyruvate	110,00
Amino acids	L-Arginine x HCl	84,00	L-Lysine x HCl	146,20
	L-Cysteine x 2HCl	62,58	L-Methionine	30,00
	L-Glutamine	584,00	L-Phenylalanine	66,00
	L-Glutamic acid	75,00	L-Serine	42,00
	Glycine	30,00	L-Threonine	95,20
	L-Histidine x HCl x H_2O	42,00	L-Tryptophan	16,00
	L-Hydroxyproline	10,00	L-Tyrosine x 2Na	103,79
	L-Isoleucine	104,80	L-Valine	93,60
	L-Leucine	104,80		
Vitamins	D-Calcium pantothenate	4,00	Nicotinamide	4,00
	Choline chloride	4,00	Pyridoxine x HCl	4,00
	Folic acid	4,00	Riboflavin	0,40
	myo-Inositol	7,00	Thiamine x HCl	4,00

When 5958 mg/l Hepes are included there are only 5400 mg /l Sodium chloride.

3

Schedule for DMEM without Glucose

	L-Glutamine	Stab. Glutamine	Sodium pyruvate	Phenol red	Special
01548S1				X	
01549			X	X	
01506	X			X	
01551	X		X	X	
01548					

Schedule for DMEM with 1,0 g/l Glucose

	L-Glutamine	Stab. Glutamine	Sodium pyruvate	Phenol red	Hepes	Special
01500			X	X		
01550	X		X	X		
02500		X	X	X		
03556						
01159		X				
01515	X		X			
02500S1		X	X			
01516	X					
01250			X	X	25 mM	
05551	X		X	X	25 mM	
01555	X			X		

PAN™ BIOTECH GmbH

Each formulation possible

Dulbecco's Modified Eagle Medium

Schedule for DMEM with 4,5 g/l Glucose

	L-Glutamine	Stab. Glutamine	Sodium pyruvate	Phenol red	Hepes	Special
03500				X		
03600			X	X		
03550	X			X		
03590	X		X	X		
04500		X		X		
04510		X	X	X		
01161						
01158			X			
03591	X		X			
03588		X	X			
01597			X	X	25 mM	
05540	X			X	25 mM	
05545	X				25 mM	
05550	X		X	X	25 mM	
04550		X		X	25 mM	
03520				X		See above
03510				X		See above
01162		X	X		12,5 mM	See above
03598	X		X	X		See above
04057	X			X	25 mM	See above
04055				X		See above
03560	X			X		See above
03596	X		X	X		See above
03551	X			X		See above
01163		X	X		25 mM	See above
03503				X		See above

DMEM F12

Description

This medium supports the growth of almost all cell lines. For example it is used for pancreas cells, sertoli cells or to culture cells, which are used for human protein production.

It combines the advantages of both media DMEM (high concentration of amino acids and vitamins) and Ham's F12 (higher concentration of zinc sulphate, putrescine and linoleic acid).

DMEM F12

Liquid Media

DMEM/F12: (1:1) without L-Glutamine with 1,2 g/l $NaHCO_3$	500 ml	P04-41450
DMEM/F12 (1:1) with L-Glutamine with 1,2 g/l $NaHCO_3$	500 ml	P04-41500
DMEM/F12 (1:1) with stab. Glutamine with 1,2 g/l $NaHCO_3$	500 ml	P04-41150
DMEM/F12 (1:1) without L-Glutamine with 15 mM Hepes with 1,2 g/l $NaHCO_3$	500 ml	P04-41550
DMEM/F12 (1:1) with L-Glutamine with 15 mM Hepes with 1,2 g/l $NaHCO_3$	500 ml	P04-41250
DMEM/F12 (1:1) with L-Glutamine with 25 mM Hepes with 1,2 g/l $NaHCO_3$	500 ml	P04-41252

Special Media

Minimum order quantity: 20 x 500 ml

DMEM/F12 (1:1) without L-Glutamine **with D-Valine** with 1,2 g/l $NaHCO_3$	500 ml	P04-03800
DMEM/F12 (1:1) without L-Glutamine **without Glucose** with 1,2 g/l $NaHCO_3$	500 ml	P04-41151
DMEM/F12 (1:1) with L-Glutamine **without Phenol red** with 1,2 g/l $NaHCO_3$	500 ml	P04-41650
DMEM/F12 (1:1) with stab. Glutamine with 15 mM Hepes **with 2,2 g/l $NaHCO_3$**	500 ml	P04-41753
DMEM/F12 (1:1) with stab. Glutamine with 15 mM Hepes **without Calcium chloride** with 1,2 g/l $NaHCO_3$	500 ml	P04-41251

Powder Media

DMEM/F12 (1:1) without L-Glutamine without $NaHCO_3$	10 L 50 L	P03-6010 P03-6050
DMEM/F12 (1:1) with L-Glutamine without $NaHCO_3$	10 L 50 L	P03-1110 P03-1150
DMEM/F12 (1:1) without L-Glutamine with 15 mM Hepes without $NaHCO_3$	10 L 50 L	P03-6210 P03-6250
DMEM/F12 (1:1) with L-Glutamine with 15 mM Hepes without $NaHCO_3$	10 L 50 L	P03-6110 P03-6150
DMEM/F12 (1:1) with L-Glutamine with 25 mM Hepes without $NaHCO_3$	10 L 50 L	P03-1210 P03-1250

DMEM F12

Composition

	Components	mg/L	Components	mg/L
Inorganic Salts	Calcium chloride anhydrous	116,00	Magnesium sulfate x $7H_2O$	100,00
	Iron(III)-nitrate x $9H_2O$	0,05	Sodium chloride	6999,50
	Iron(II)-sulfate x $7H_2O$	0,42	Sodium dihydrogen phosphate x H_2O	62,50
	Potassium chloride	311,80	di-Sodium hydrogen phosphate dried	71,02
	Copper(II)-sulfate x $5H_2O$	0,0013	Zinc sulfate x $7H_2O$	0,432
	Magnesium sulfate x $6H_2O$	61,00		
Other Components	D(+)-Glucose anhydrous	3151,0	Sodium pyruvate	110,00
	Hypoxanthine	2,04	Phenol red	8,10
	Linolsäure	0,042	Putrescin x 2HCl	0,081
	DL-68-Lipoic acid	0,105	Thymidine	0,36
Amino acids	L-Alanine	4,46	L-Leucine	58,96
	L-Arginine x HCl	147,35	L-Lysine x HCl	91,37
	L-Asparagine x H_2O	7,50	L-Methionine	17,24
	L-Aspartic acid	6,66	L-Phenylalanine	35,48
	L-Cystine	24,00	L-Proline	17,27
	L-Cysteine x HCl x H_2O	17,56	L-Serine	26,26
	L-Glutamine	365,00	L-Threonine	53,56
	L-Glutamic acid	7,36	L-Tryptophan	9,02
	Glycine	18,76	L-Tyrosine	38,72
	L-Histidine x HCl x H_2O	31,48	L-Valine	52,66
	L-Isoleucine	54,37		
Vitamins	D-(+)-Biotine	0,004	Nikotinamide	2,02
	D-Calcium pantothenate	2,12	Pyridoxine x HCl	2,03
	Cholin chloride	8,98	Riboflavin	0,22
	Folic acid	2,66	Thiamine x HCl	2,17
	myo-Inositol	12,51	Vitamin B_{12}	0,68

Schedule

	L-Glutamine	Stab. Glutamine	Sodium pyruvate	Phenol red	Hepes	Special
41450			X	X		
41500	X		X	X		
41150		X	X	X		
41550			X	X	15 mM	
41250	X		X	X	15 mM	
41252	X		X	X	25 mM	
03800			X	X		See above
41151			X	X		See above
41650	X		X			See above
41753		X	X	X	15 mM	See above
41251		X	X	X	15 mM	See above

Each formulation possible

Glasgow MEM (BHK 21)

Description

The GMEM was developed as a modification of BME to culture primary baby hamster kidney cells. This version has twice the concentration of vitamins and amino acids.

Liquid Media

Glasgow-MEM (BHK 21) without L-Glutamine without Tryptose phosphate with 2,75 g/l $NaHCO_3$	500 ml	P04-97500
Glasgow-MEM (BHK 21) without L-Glutamine with Tryptose phosphate with 2,75 g/l $NaHCO_3$	500 ml	P04-98500
Glasgow-MEM (BHK 21) with L-Glutamine without Tryptose phosphate with 2,75 $NaHCO_3$	500 ml	P04-95500
Glasgow-MEM (BHK 21) with L-Glutamine with Tryptose phosphate with 2,75 g/l $NaHCO_3$	500 ml	P04-96500

Powder Media

Glasgow-MEM (BHK 21) without L-Glutamine without Tryptose phosphate without $NaHCO_3$	10 L 50 L	P03-3110 P03-3150
Glasgow-MEM (BHK 21) without L-Glutamine with Tryptose phosphate without $NaHCO_3$	10 L 50 L	P03-3210 P03-3250
Glasgow-MEM (BHK 21) with L-Glutamine without Tryptose phosphate without $NaHCO_3$	10 L 50 L	P03-6810 P03-6850
Glasgow-MEM (BHK 21) with L-Glutamine with Tryptose phosphate without $NaHCO_3$	10 L 50 L	P03-6910 P03-6950

Composition

	Components	w/o Tryptose Phos-phate mg/L	with Tryptose Phos-phate mg/L
Inorganic Salts	Calcium chloride x $2H_2O$	264,92	238,43
	Iron(III) nitrate x $9H_2O$	0,10	0,09
	Magnesium sulfate dried	139,57	125,64
	Potassium chloride	400,00	360,00
	Sodium chloride	6400,0	6260,00
	di-Sodium hydrogen phosphate	0,00	250,00
	Sodium dihydrogen phosphate x H_2O	124,00	111,60
Other Compo-nents	D(+)-Glucose anhydrous	4500,00	4250,00
	Phenol red	15,00	13,50
	Pepton from Casein	0,00	1000,00
	Pepton from meat	0,00	500,00
	Yeast extrakt	0,00	500,00
Amino acids	L-Arginine x HCl	42,00	37,80
	L-Cystine	24,00	21,60
	L-Glutamine	292,00	262,80
	L-Histidine x HCl x H_2O	21,00	18,90
	L-Isoleucine	52,40	47,16
	L-Leucine	52,40	47,16
	L-Lysine x HCl	73,10	65,79
	L-Methionine	15,00	13,50
	L-Phenylalanine	33,00	29,70
	L-Threonine	47,60	42,84
	L-Tryptophan	8,00	7,20
	L-Tyrosine	36,20	32,52
	L-Valine	46,80	42,12
Vitamins	D-Calcium pantothenate	2,00	1,80
	Choline chloride	2,00	1,80
	Folic acid	2,00	1,80
	myo-Inositol	3,60	3,24
	Nicotinamide	2,00	1,80
	Pyridoxal x HCl	2,00	1,80
	Riboflavin	0,20	0,18
	Thiamine x HCl	2,00	1,80

Grace‘s Insect Medium

Description

The Grace‘s insect medium was originally developed to culture insect cells including SF9 and SF21 cells. Moreover it supports a broad range of lepidopteran cells.

Liquid Media

Grace's Insect Medium without L-Glutamine with 0,35 g/l $NaHCO_3$	500 ml	P04-81500
Grace’s Insect Medium with L-Glutamine with 0,35 g/l $NaHCO_3$	500 ml	P04-82500

Powder Media

Grace’s Insect Medium without L-Glutamine without $NaHCO_3$	10 L 50 L	P03-9010 P03-9050
Grace’s Insect Medium with L-Glutamine without $NaHCO_3$	10 L 50 L	P03-9110 P03-9150

Composition

	Components	mg/L
Inorganic Salts	Calcium chloride x $2H_2O$	1324,62
	Potassium chloride	2240,00
	Magnesium chloride x $6H_2O$	2278,86
	Magnesium sulfate dried	1765,23
	di-Sodium hydrogen phosphate	876,92
Other Compo-nents	DL-Malic acid	670,00
	Succinic acid	60,00
	Fructose	400,00
	Fumaric acid	55,00
	D(+)-Glucose anhydtrous	700,00
	α-Ketoglutaric acid sodium salt	425,66
	D-Sucrose	26680
Amino acids	β-Alanine	200,00
	L-Alanine	225,00
	L-Arginine x HCl	700,00
	L-Asparagine x H_2O	350,00
	L-Aspartic acid	350,00
	L-Cystine	19,18
	L-Glutamine	600,00
	L-Glutamic acid	600,00
	Glycine	650,00
	L-Histidine Base	2500,00
	L-Isoleucine	50,00
	L-Leucine	75,00
	L-Lysine x HCl	625,00
	L-Methionine	50,00
	L-Phenylalanine	150,00
	L-Proline	350,00
	L-Serine	550,00
	L-Threonine	175,00
	L-Tryptophan	100,00
	L-Tyrosine	50,00
	L-Valine	100,00
Vitamins	p-Aminobenzoic acid	0,02
	D(+)-Biotin	0,01
	D-Ca-Pantothenate	0,02
	Choline chloride	0,20
	Folic acid	0,02
	myp-Inositol	0,02
	Nikotinic acid	0,02
	Pyridoxine x HCl	0,02
	Riboflavin	0,02
	Thiamine x HCl	0,02

Ham‘s F12 Medium

Description

In the past Ham‘s F12 was the first choice for a serumfree cultivation of CHO-cells and is now substituted through better serumfree systems like our C6000, which is also proteinfree. However it is an appropriate medium for mammalian cells when it is supplemented with FBS. It contains a high concentration of vitamins, amino acids and trace elements. The content of zinc sulphate is increased and it contains putrescine and linoleic acid.

Liquid Media

Ham’s F12 Medium without L-Glutamine with 1,176 g/l $NaHCO_3$	500 ml	P04-14550
Ham’s F12 Medium with L-Glutamine with 1,176 g/l $NaHCO_3$	500 ml	P04-14500
Ham’s F12 Medium with L-Glutamine without Phenol red with 25 mM Hepes with 1,176 g/l $NaHCO_3$	500 ml	P04-14501
Ham’s F12 Medium with stab. Glutamine with 1,176 g/l $NaHCO_3$	500 ml	P04-15500
Ham’s F12 Medium without L-Glutamine without Phenol red with 1,176 g/l $NaHCO_3$	500 ml	P04-14559
Ham’s F12K Medium with L-Glutamine **with 2,5 g/l $NaHCO_3$**	500 ml	P04-15600

Powder Media

Ham’s F12 Medium without L-Glutamine without $NaHCO_3$	10 L 50 L	P03-4910 P03-4950
Ham’s F12 Medium with L-Glutamine without $NaHCO_3$	10 L 50 L	P03-4110 P03-4150
Ham’s F12 Medium with L-Glutamine with 25 mM Hepes without $NaHCO_3$	10 L 50 L	P03-4210 P03-4250

Composition

	Components	mg/L
Inorganic Salts	Calcium chloride anhydrous	33,30
	Copper(II) sulfate x $5H_2O$	0,003
	Iron(II) sulfate x $7H_2O$	0,834
	Magnesium chloride x $6H_2O$	122,00
	Potassium chloride	223,60
	Sodium chloride	7099,00
	di-Sodium hydrogen phosphate anhydrous	142,04
	Zinc sulfate x $7H_2O$	0,86
Other Compo-nents	D(+)-Glucose anhydrous	1801,60
	Hepes	5958,00
	Hypoxanthine	5,46
	Linoleic acid	0,084
	DL-α-Lipoic acid	0,21
	Phenol red	1,20
	Putrescine x 2HCl	0,16
	Sodium pyruvate	110,10
	Thymidine	0,73
Amino acids	L-Alanine	8,91
	L-Arginine x HCl	210,70
	L-Asparagine x H_2O	15,01
	L-Aspartic acid	13,31
	L-Cysteine x HCl x H_2O	35,12
	L-Glutamine	146,20
	L-Glutamic acid	14,71
	Glycine	7,51
	L-Histidine x HCl x H_2O	20,96
	L-Isoleucine	3,94
	L-Leucine	13,12
	L-Lysine x HCl	36,54
	L-Methionine	4,48
	L-Phenylalanine	4,96
	L-Proline	34,53
	L-Serine	10,51
	L-Threonine	11,91
	L-Tryptophan	2,04
	L-Tyrosine x 2Na x $2H_2O$	7,84
	L-Valine	11,71
Vitamins	D(+)-Biotin	0,007
	D-Calcium pantothenate	0,24
	Choline chloride	13,96
	Folic acid	1,32
	myo-Inositol	18,02
	Nicotinamide	0,037
	Pyridoxine x HCl	0,062
	Riboflavin	0,038
	Thiamine x HCl	0,34
	Vitamin B_{12}	1,36

Ham‘s F12 Medium

Schedule

	L-Glutamine	Stab. Glutamine	Sodium pyruvate	Phenol red	Hepes	Special
14550			X	X		
14500	X		X	X		
14501			X		25 mM	
15500		X	X	X		
14559			X			
15600	X		X	X		See above

Ham‘s F10 Medium

Description

Ham‘s F10 is an alternative of Ham‘s F12 and was used primarily to culture CHO-cells. Today Ham‘s F10 can be used with or without FBS for many different cell cultures.

It finds a use for example in primary cells of rat and chicken, but also for human diploid cells.

Liquid Media

Ham's F10 Medium without L-Glutamine with 1,2 g/l $NaHCO_3$	500 ml	P04-12050	Ham’s F10 Medium with stab. Glutamine with 1,2 g/l $NaHCO_3$	500 ml	P04-13500
Ham’s F10 Medium with L-Glutamine with 1,2 g/l $NaHCO_3$	500 ml	P04-12500	Ham’s F10 Medium with L-Glutamine with 25 mM Hepes with 1,2 g/l $NaHCO_3$	500 ml	P04-13050

Special Media

Minimum order quantity: 20 x 500 ml

Ham’s F10 Medium without L-Glutamine without Phenol red with 1,2 g/l $NaHCO_3$	500 ml	P04-12049	Ham’s F10 Medium with stab. Glutamine without Glucose with 1,2 g/l $NaHCO_3$	500 ml	P04-13501

Powder Media

Ham's F-10 Medium without L-Glutamine without $NaHCO_3$	10 L 50 L	P03-5010 P03-5050	Ham’s F-10 Medium with L-Glutamine without $NaHCO_3$	10 L 50 L	P03-3910 P03-3950

Each formulation possible

Ham‘s F10 Medium

Composition

	Components	mg/L	Components	mg/L
Inorganic Salts	Calcium chloride x $2H_2O$	44,09	Potassium dihydrogen phosphate	83,00
	Copper(II) sulfate x $5H_2O$	0,003	Sodium chloride	7400,00
	Iron(II) sulfate x $7H_2O$	0,834	di-Sodium hydrogen phosphate anhydrous	153,70
	Magnesium sulfate dried	74,62		
	Potassium chloride	285,00	Zinc sulfate x $7H_2O$	0,029
Other Components	D(+)-Glucose anhydrous	1100,00	Phenol red	1,20
	Hypoxanthine	4,08	Sodium pyruvate	110,00
	DL-α-Lipoic acid	0,21	2`-Deoxythymidine	0,73
	Hepes	5958,00		
Amino acids	L-Alanine	8,91	L-Leucine	13,10
	L-Arginine x HCl	211,00	L-Lysine x HCl	29,30
	L-Asparagine x H_2O	15,00	L-Methionine	4,48
	L-Aspartic acid	13,30	L-Phenylalanine	4,96
	L-Cysteine x HCl x H_2O	35,12	L-Proline	11,50
	L-Glutamine	146,20	L-Serine	10,50
	L-Glutamic acid	14,70	L-Threonine	3,57
	Glycine	7,51	L-Tryptophan	0,60
	L-Histidine x HCl x H_2O	21,00	L-Tyrosine	1,81
	L-Isoleucine	2,60	L-Valine	3,50
Vitamins	D(+)-Biotin	0,024	Nicotinamide	0,615
	D-Calcium pantothenate	0,715	Pyridoxine x HCl	0,21
	Choline chloride	0,698	Riboflavin	0,376
	Folic acid	1,32	Thiamine x HCl	1,01
	myo-Inositol	0,541	Vitamin B_{12}	1,36

When 5958,00 mg/l Hepes are included there are only 6900 mg /l Sodium chloride.

Schedule

	L-Glutamine	Stab. Glutamine	Phenol red	Hepes	Special
12050			X		
12500	X		X		
13500		X	X		
13050	X		X	25 mM	
12049					
13501		X	X		

Iscove's Modified Dulbecco's Media

Description

The IMDM is a modificated DMEM, with a higher content of vitamins, selenium and amino acids. As it is supplemented with albumine, transferrine and soya lipids it can be excellently applied for culturing lymphocytes, marrow cells and hybridoma.

Note: For hybridomas there is a better and highly efficient protein free medium available: Our PANSERIN H4000.

Liquid Media

IMDM without L-Glutamine with 3,024 g/l $NaHCO_3$	500 ml	P04-20250
IMDM with L-Glutamine with 3,024 $NaHCO_3$	500 ml	P04-20350
IMDM without L-Glutamine with 25 mM Hepes with 3,024 g/l $NaHCO_3$	500 ml	P04-20050
IMDM with L-Glutamine with 25 mM Hepes with 3,024 g/l $NaHCO_3$	500 ml	P04-20150
IMDM with stab. Glutamine with 25 mM Hepes with 3,024 g/l $NaHCO_3$	500 ml	P04-20450
IMDM with stab. Glutamine with 25 mM Hepes **without Phenol red** with 3,024 g/l $NaHCO_3$	500 ml	P04-20451

Special Media

Minimum order quantity: 20 x 500 ml

IMDM without L-Glutamine **with 1,0 g/l Glucose** with 3,024 g/l $NaHCO_3$	500 ml	P04-20259
IMDM with stab. Glutamine **with 3,7 g/l $NaHCO_3$**	500 ml	P04-20260
IMDM with stab. Glutamine with 25 mM Hepes without Phenol red **315 mOsm** with 3,024 g/l $NaHCO_3$	500 ml	P04-20451S1
IMDM with L-Glutamine with 25 mM Hepes **320 mOsm** with 3,024 g/l $NaHCO_3$	500 ml	P04-20150S2
IMDM with L-Glutamine **with 1,5 g/l $NaHCO_3$**	500 ml	P04-20351

Powder Media

IMDM without L-Glutamine without $NaHCO_3$	10 L 50 L	P03-5210 P03-5250
IMDM with L-Glutamine without $NaHCO_3$	10 L 50 L	P03-1310 P03-1350
IMDM with L-Glutamine with 25 mM Hepes without $NaHCO_3$	10 L 50 L	P03-1410 P03-1450

Each formulation possible

Iscove's Modified Dulbecco's Media

Composition

	Components	mg/L	Components	mg/L
Inorganic Salts	Calcium chloride x $2H_2O$	218,56	Sodium chloride	5005,00
	Potassium chloride	330,00	Sodium dihydrogen phosphate x H_2O	125,00
	Potassium nitrate	0,076	Sodium selenite anhydrous	0,011
	Magnesium sulfate dried	139,52		
Other Components	D(+)-Glucose anhydrous	4500,00	Sodium pyruvate	110,00
	Hepes	5958,00	Phenol red	15,00
Amino acids	L-Alanine	25,00	L-Leucine	105,00
	L-Arginine x HCl	84,00	L-Lysine x HCl	146,00
	L-Asparagine x H_2O	28,40	L-Methionine	30,00
	L-Aspartic acid	30,00	L-Phenylalanine	66,00
	L-Cystine	70,00	L-Proline	40,00
	L-Glutamine	584,00	L-Serine	42,00
	L-Glutamic acid	75,00	L-Threonine	95,00
	Glycine	30,00	L-Tryptophan	16,00
	L-Histidine x HCl x H_2O	42,00	L-Tyrosine	74,86
	L-Isoleucine	105,00	L-Valine	94,00
Vitamins	D(+)-Biotin	0,0130	Nicotinamide	4,00
	D-Calcium pantothenate	4,00	Pyridoxal x HCl	4,00
	Choline chloride	4,00	Riboflavin	0,40
	Folic acid	4,00	Thiamine x HCl	4,00
	myoi-Inositol	7,20	Vitamin B_{12}	0,013

When 5958,00 mg/l Hepes are included there are only 4505,00 mg /l Sodium chloride.

Schedule

	L-Glutamine	Stab. Glutamine	Phenolred	Hepes	Special
20250			X		
20350	X		X		
20260		X	X		See above
20050			X	25 mM	
20150	X		X	25 mM	
20450		X	X	25 mM	
20451		X		25 mM	See above
20259			X		See above
20451S1		X		25 mM	See above
20150S2	X		X	25 mM	See above
20351	X		X		See above

IPL-41 Insect Cell Medium

Description

IPL-41 is primary used for the growth and maintenance of lepidopterans and for the propagation of viruses in these cells lines. The medium for example is used for long time culture of baculovirus infected spodotera cells.

Liquid Media

IPL-41 Insect Medium without L-Glutamine with 0,35 g/l $NaHCO_3$	500 ml	P04-85500
IPL-41 Insect Medium with L-Glutamine with 0,35 g/l $NaHCO_3$	500 ml	P04-85600

Powder Media

IPL-41 Insect Medium without L-Glutamine without $NaHCO_3$	10 L 50 L	P03-9210 P03-9250

Composition

	Components	mg/L
Inorganic Salts	Ammonium heptamolybdate x $4H_2O$	0,04
	Calcium chloride x $2H_2O$	662,31
	Cobalt(II) chloride x $6H_2O$	0,05
	Copper chloride x $2H_2O$	0,20
	Iron(II) sulfate x $7H_2O$	0,55
	Magnesium sulfate dried	1193,40
	Manganese chloride x $4H_2O$	0,02
	Potassium chloride	1200,00
	Sodium chloride	2850,00
	Sodium dihydrogen phosphate x H_2O	1160,00
	Zinc chloride	0,04
Other Components	Fumaric acid	4,40
	D(+)-Glucose anhydrous	2500,00
	α-Ketoglutaric acid sodium salt	34,05
	DL-Malic acid	53,60
	D-Maltose x H_2O	1052,58
	Succinic acid	4,80
	Sucrose	1650,00
Amino acids	β-Alanine	300,00
	L-Arginine x HCl	800,00
	L-Aspartic acid	1300,00
	L-Asparagine x H_2O	1477,14
	L-Cystine	100,00
	L-Glutamine	1000,00
	L-Glutamic acid	1500,00
	Glycine	200,00
	L-Histidine Base	200,00
	L-Hydroxyproline	800,00
	L-Isoleucine	750,00
	L-Leucine	250,00
	L-Lysine x HCl	700,00
	L-Methionine	1000,00
	L-Phenylalanine	1000,00
	L-Proline	500,00
	L-Serine	200,00
	L-Threonine	200,00
	L-Tryptophan	100,00
	L-Tyrosine	250,02
	L-Valine	500,00
	p-Aminobenzoic acid	0,32
Vitamins	D(+)-Biotin	0,16
	D-Calcium pantothenate	0,008
	Choline chloride	20,00
	Folic acid	0,08
	myo-Inositol	0,40
	Nicotinic acid	0,16
	Nicotinamide	0,16
	Pyridoxine x HCl	0,40
	Riboflavin	0,08
	Thiamine x HCl	0,08
	Vitamin B_{12}	0,24

Each formulation possible

PAN™ BIOTECH GmbH

Joklik-MEM

Description

Modification of MEM for suspension cultures. Due to the absence of calcium chloride in this formulation the attachment of cells is reduced.

Liquid Media

Joklik-MEM Hepes Medium with L-Glutamine with 3,6 g/l Hepes	500 ml	P04-21300
Joklik-MEM modified for spinner culture with EBSS (modified) without L-Glutamine without Antibiotica without Calcium chloride with 2,0 g/l $NaHCO_3$	500 ml	P04-21200

Powder Media

Joklik-MEM modified for spinner culture with EBSS (modified) without L-Glutamine without Antibiotica without Calcium chloride without $NaHCO_3$	10 L 50 L	P03-02010P P03-02050P

Composition

	Components	mg/L
Inorganic Salts	Magnesium chloride x $6H_2O$	200,00
	Potassium chloride	400,00
	Sodium chloride	6500,00
	Sodium dihydrogen phosphate x H_2O	1327,00
Other Compo-nents	D(+)-Glucose anhydrous	2000,00
	Phenol red	10,00
Amino acids	L-Arginine x HCl	126,00
	L-Cystine	24,00
	L-Glutamine	294,00
	L-Histidine Base	31,00
	L-Isoleucine	52,00
	L-Leucine	52,00
	L-Lysine x H_2O	65,00
	L-Methionine	15,00
	L-Phenylalanine	32,00
	L-Threonine	48,00
	L-Tryptophan	10,00
	L-Tyrosine	32,60
	L-Valine	46,00
Vitamins	D-Calcium pantothenate	1,00
	Choline chloride	1,00
	Folic acid	1,00
	myo-Inositol	2,00
	Nicotinamide	1,00
	Pyridoxal x HCl	1,00
	Riboflavin	0,10
	Thiamine x HCl	1,00

Leibovitz's L-15 Medium

Description

L-15 contains no sodium hydrogen carbonate and no bicarbonate, because it is buffered already by the high concentration of amino acids. The L-15 medium supports the growth of established cells like Hep-2, but also human nerve cells and primary tissue explantates. With 10 % tryptose phosphate broth it is also ideally suitable for the cultivation of insect cell lines.

Liquid Media

Leibovitz's L-15 Medium without L-Glutamine without $NaHCO_3$	500 ml	P04-27055
Leibovitz's L-15 Medium with L-Glutamine without $NaHCO_3$	500 ml	P04-27500
Leibovitz's L-15 Medium with stab. Glutamine without $NaHCO_3$	500 ml	P04-27050

Leibovitz's L-15 Medium

Special Media

Minimum order quantity: 20 x 500 ml

Leibovitz's L-15 Medium with L-Glutamine **with 2,0 g/l $NaHCO_3$**	500 ml	P04-27053	Leibovitz's L-15 Medium without L-Glutamine **without Phenol red** without $NaHCO_3$	500 ml	P04-27054

Powder Media

Leibovitz's L-15 Medium with L-Glutamine without $NaHCO_3$	10 L 50 L	P03-1510 P03-1550	Leibovitz's L-15 Medium with L-Glutamine with 25 mM Hepes without $NaHCO_3$	10 L 50 L	P03-1610 P03-1650

Composition

	Components	mg/L	Components	mg/L
Inorganic Salts	Calcium chloride x $2H_2O$	185,44	Potassium dihydrogen phosphate	60,00
	Magnesium chloride x $6H_2O$	200,00	Sodium chloride	8000,00
	Magnesium sulfate dried	139,52	di-Sodium hydrogen phosphate	190,00
	Potassium chloride	400,00		
Other Components	D(+)-Galactose anhydrous	900,00	Phenol red	10,00
	Hepes	5958,00	Sodium pyruvate	550,00
Amino acids	L-Alanine	225,00	L-Lysine x HCl	93,75
	L-Arginine Base	500,00	L-Methionine	75,00
	L-Asparagine x H_2O	250,00	L-Phenylalanine	125,00
	L-Cysteine	120,00	L-Serine	200,00
	L-Glutamine	300,00	L-Threonine	300,00
	Glycine	200,00	L-Tryptophan	20,00
	L-Histidine Base	250,00	L-Tyrosine	300,00
	L-Isoleucine	250,00	L-Valine	100,00
	L-Leucine	125,00		
Vitamins	D-Calcium pantothenate	1,00	Pyridoxol x HCl	1,00
	Choline chloride	1,00	Riboflavin-5'-phosphate sodium salt x H_2O	0,1075
	Folic acid	1,00		
	myo-Inositol	2,00	Thiamine monophosphate chloride	1,00
	Nicotinamide	1,00		

When 5958,00 mg/l Hepes are included there are only 7500,00 mg /l Sodium chloride.

Schedule

	L-Glutamine	Stab. Glutamine	Sodium pyruvate	Phenol red	Special
27055			X	X	
27500	X		X	X	
27050		X	X	X	
27053	X		X	X	See above
27054			X		See above

Each formulation possible

Mc Coy‘s 5A Medium

Description

Mc Coy‘s medium is a complete medium with all amino acids and vitamins. It is used for growing primary cultures. This group contains marrow cells, gingival cells, adrenal cells, spleen cells, lung cells, rat embryos and other cell types.

Liquid Media

Mc Coy’s 5A Medium (modified) with L-Glutamine with 2,2 g/l $NaHCO_3$	500 ml	P04-05500
Mc Coy’s 5A Medium (modified) with stab. Glutamine with 2,2 g/l $NaHCO_3$	500 ml	P04-06500
Mc Coy’s 5A Medium (modified) with L-Glutamine with 25 mM Hepes with 2,2 g/l $NaHCO_3$	500 ml	P04-05050

Special Media

Minimum order quantity: 20 x 500 ml

Mc Coy’s 5A Medium without L-Glutamine **without Phenol red** with 2,2 g/l $NaHCO_3$	500 ml	P04-05610
Mc Coy's 5A Medium (modified) with L-Glutamine **without Phenol red** with 2,2 g/l $NaHCO_3$	500 ml	P04-05611

3

Powder Media

McCoy’s 5A Medium (modified) with L-Glutamine without $NaHCO_3$	10 L 50 L	P03-1710 P03-1750
McCoy’s 5A Medium (modified) with L-Glutamine with 25 mM Hepes without $NaHCO_3$	10 L 50 L	P03-1810 P03-1850

Schedule

	L-Glutamine	Stab. Glutamine	Phenolred	Hepes	Special
05500	X		X		
06500		X	X		
05050	X		X	25 mM	
05610					See above
05611	X				See above

Mc Coy's 5A Medium

Composition

	Components	mg/L	Components	mg/L
Inorganic Salts	Calcium chloride x $2H_2O$	132,46	Sodium chloride	6460,00
	Magnesium sulfate dried	139,52	Sodium dihydrogen phosphate x H_2O	580,00
	Potassium chloride	400,00		
Other Components	D(+)-Glucose anhydrous	3000,00	Bacto - Peptone	600,00
	Glutathione (red.)	0,50	Phenol red	10,00
	Hepes	5958,00		
Amino acids	L-Alanine	13,36	L-Leucine	39,36
	L-Arginine x HCl	42,10	L-Lysine x HCl	36,50
	L-Asparagine x H_2O	45,00	L-Methionine	14,90
	L-Aspartic acid	19,97	L-Phenylalanine	16,50
	L-Cysteine	24,24	L-Proline	17,30
	L-Glutamine	219,20	L-Serine	26,30
	L-Glutamic acid	22,10	L-Threonine	17,90
	Glycine	7,50	L-Tryptophan	3,10
	L-Histidine x HCl x H_2O	20,76	L-Tyrosine	18,10
	L-Hydroxyproline	19,70	L-Valine	17,60
	L-Isoleucine	39,36		
Vitamins	p-Aminobenzoic acid	1,00	Nicotinamide	0,50
	Ascorbic acid	0,50	Nicotinic acid	0,50
	D(+)-Biotin	0,20	Pyridoxal x HCl	0,50
	D-Calcium pantothenate	0,20	Pyridoxol x HCl	0,50
	Choline chloride	5,00	Riboflavin	0,20
	Folic acid	10,00	Thiamine x HCl	0,20
	myo-Inositol	36,00	Vitamin B_{12}	2,00

When 5958,00 mg/l Hepes are included there are only 5960,00 mg /l Sodium chloride.

MCDB Medium

Description

MCDB 131 is a reduced serum supplemented medium for the cultivation of human microvascular endothelial cells. It must be supplemented with dialyzed serum, EGF and hydrocortisone.

MCDB 153 is a defined medium for the clonal growth of human ceratinocytes. It must be supplemented with EGF, insulin, hydrocortisone, ethanolamine and phosphoethanolamine or with serum. With our Panserin 801 we offer to you a serumfree alternative.

Liquid Media

MCDB 131
without L-Glutamine
with 1,18 g/l $NaHCO_3$

500 ml P04-80057

MCDB 131
with L-Glutamine
with 1,176 g/l $NaHCO_3$

500 ml P04-80053

MCDB 131
without Glutamine
with 25 mM Hepes
with 1,176 g/l $NaHCO_3$

500 ml P04-80054

Each formulation possible

PAN™ BIOTECH GmbH

MCDB Medium

Special Media

Minimum order quantity: 20 x 500 ml

MCDB 151 without L-Glutamine with 1,176 g/l $NaHCO_3$	500 ml	P04-80056	MCDB 153 without Glutamine **without Calcium** with 1,176 g/l $NaHCO_3$	500 ml	P04-80055
MCDB 170 with L-Glutamine **with 2,5 g/l $NaHCO_3$**	500 ml	P04-80058			

Composition

	MCDB Media	MCDB 131	MCDB 151	MCDB 153	MCDB 170
	Components	**mg/L**	**mg/L**	**mg/L**	**mg/L**
Inorganic Salts	Ammonium Metavandate	0,0006	–	0,000585	0,000585
	Calcium Chloride x $2H_2O$	235,05	4,411	4,411	222,00
	Cupric Sulfate x $5H_2O$	0,0012	0,0025	0,00275	0,0002497
	Iron (III) sulfate x $7H_2O$	0,283	0,417	1,39	–
	Magnesiumchloride x $6H_2O$	–	122,00	122,00	–
	Magnesiumsulfate dried	1565,20	–	0,00012	180,57
	Manganese Sulfate x H_2O	0,0002	–	0,000151	0,0001205
	Ammonium Molybdate x $4H_2O$	0,0037	–	0,00124	0,0012359
	Nickel Chloride x $6H_2O$	0,0007	–	0,00012	0,0000011885
	Potassium Chloride	298,00	111,83	111,83	186,25
	Potassium Phosphate (anhyd)	–	–	–	68,05
	Sodium Acetate x $3H_2O$	–	500,21	500,21	–
	Sodium Chloride	6430,00	7599,00	7599,00	7008,00
	Sodium Metasilicate x $9H_2O$	2,09	–	0,142	0,1421
	di-Sodium hydrogen phosphate	71,00	284,088	284,088	–
	Sodium Selenite anhydrous	0,0039	–	0,0038	0,0052
	Stannous Chloride x H_2O	–	–	0,000113	0,000001128
	Zinc Sulfate x $7H_2O$	0,0003	0,863	0,144	0,14375
Other Compo-nents	Adenine	0,135	30,88	24,32	0,1351
	D-Glucose	1000,00	1081,00	1081,00	1441,60
	Hepes	–	6600,00	6600,00	–
	DL-alpha-Lipoic acid	0,0021	0,206	0,206	0,002063
	Phenol Red • Na	10,00	1,242	1,242	1,242
	Putrescine x 2HCl	0,002	0,1611	0,161	0,0001611
	Sodium pyruvate	110,00	55,00	55,00	110,00
	Thymidine	0,024	0,727	0,727	0,07266
Amino acids	L-Alanine	2,70	8,91	8,91	8,90
	L-Arginine • HCl	63,20	210,70	210,70	52,26
	L-Asparagine • H_2O	15,00	15,00	15,00	150,14
	L-Aspartic Acid	13,30	3,99	3,99	13,31
	L-Cysteine • HCl • H_2O	35,00	42,04	42,04	8,55
	L-Glutamic Acid	4,00	14,71	14,71	14,71
	L-Glutamine	1461,00	877,20	877,20	292,00
	Glycine	2,30	7,51	7,51	7,50
	L-Histidine • HCl • H_2O	42,00	16,77	16,77	15,52
	L-Isoleucine	66,00	1,968	1,968	13,12
	L-Leucine	131,00	65,60	65,60	39,36
	L-Lysine • HCl	182,00	18,27	18,27	29,24
	L-Methionine	15,00	4,476	4,48	4,48
	L-Phenylalanine	33,00	4,956	4,96	4,96
	L-Proline	11,50	34,53	34,53	5,76
	L-Serine	32,00	63,06	63,06	31,53
	L-Threonine	12,00	11,91	11,91	35,73
	L-Tryptophan	4,10	3,06	3,06	6,126
	L-Tyrosine	18,10	22,52	3,41	9,06
	L-Valine	–	117,10	35,13	35,1
Vitamins	D-Biotin	0,0073	0,0146	0,0146	0,007329
	Choline Chloride	1,40	13,96	13,96	13,96
	Folic Acid	0,60	0,79	0,79	–
	Folinic Acid • Ca	–	–	–	0,006016
	myo-Inositol	7,20	18,02	18,02	18,02
	Niacinamide	6,10	0,0366	0,03663	6,105
	D-Calcium-pantothenate	12,00	0,238	0,258	–
	Pyridoxine • HCl	2,10	0,0617	0,06171	0,02056
	Riboflavin	0,0038	0,0376	0,0376	0,11292
	Thiamine • HCl	3,40	0,337	0,337	0,3373
	Vitamin B_{12}	0,0036	0,407	0,407	0,13554

Medium 199 with Earle's Salts

Description

The M199 was originally developed to assay the nutrient demand of embryonic chicken fibroblasts. But it works very well with many different animal specie.

For example it is used for vaccine production in virology. For long term cultures serum must be added.

Liquid Media

M199 with EBSS without L-Glutamine with 2,2 g/l $NaHCO_3$	500 ml	P04-07500	M199 with EBSS with stab. Glutamine with 2,2 g/l $NaHCO_3$	500 ml	P04-07250
M199 with EBSS with L-Glutamine with 2,2 g/l $NaHCO_3$	500 ml	P04-07050	M199 with EBSS with L-Glutamine with 25 mM Hepes with 2,2 g/l $NaHCO_3$	500 ml	P04-07150

Special Media

Minimum order quantity: 20 x 500 ml

M199 with EBSS without L-Glutamine with 25 mM Hepes without Phenol red with 2,2 g/l $NaHCO_3$	500 ml	P04-07550	M199 with EBSS with L-Glutamine with 25 mM Hepes without Phenol red with 2,2 g/l $NaHCO_3$	500 ml	P04-07561
M199 with EBSS without L-Glutamine with 25 mM Hepes without Phenol red **without $NaHCO_3$**	500 ml	P04-07560			

Powder Media

M199 with EBSS with L-Glutamine without $NaHCO_3$	10 L 50 L	P03-1910 P03-1950	M199 with EBSS with L-Glutamine with 25 mM Hepes without $NaHCO_3$	10 L 50 L	P03-2010 P03-2050

Schedule

	L-Glutamine	Stab. Glutamine	Phenol red	Hepes	Special
07500			X		
07050	X		X		
07250		X	X		
07150	X		X	25 mM	
07550				25 mM	See above
07560				25 mM	See above
07561	X			25 mM	See above

Each formulation possible

Medium 199 with Earle's Salts

Composition

	Components	mg/L	Components	mg/L
Inorganic Salts	Calcium chloride x $2H_2O$	264,92	Sodium acetate x $3H_2O$	82,95
	Iron(III) nitrate x $9H_2O$	0,72	Sodium chloride	6800,00
	Magnesium sulfate dried	139,52	Sodium dihydrogen phosphate	140,00
	Potassium chloride	400,00		
Other Components	Adenine sulfate	10,00	Hepes	5958,00
	AMP	0,20	Hypoxanthine	0,30
	ATP	1,00	Phenol red	10,00
	Cholesterol	0,20	D-Ribose	0,50
	2 -Deoxyribose	0,50	Thymine	0,30
	D(+)-Glucose anhydrous	1000,00	Tween 80	4,90
	Glutathione (red.)	0,05	Uracil	0,30
	Guanine x HCl	0,30	Xanthine	0,30
Amino acids	L-Alanine	25,00	L-Leucine	60,00
	L-Arginine x HCl	70,00	L-Lysine x HCl	70,00
	L-Aspartic acid	30,00	L-Methionine	15,00
	L-Cysteine x HCl x H_2O	0,10	L-Phenylalanine	25,00
	L-Cystine	20,00	L-Proline	40,00
	L-Glutamine	100,00	L-Serine	25,00
	L-Glutamic acid	67,00	L-Threonine	30,00
	Glycine	50,00	L-Tryptophan	10,00
	L-Histidine x HCl x H_2O	21,88	L-Tyrosine	40,00
	L-Hydroxyproline	10,00	L-Valine	25,00
	L-Isoleucine	20,00		
Vitamins	p-Aminobenzoic acid	0,05	Nicotinic acid	0,025
	Ascorbic acid	0,05	Nicotinamide	0,025
	D(+)-Biotin	0,01	Pyridoxal x HCl	0,025
	Calciferol	0,10	Pyridoxol x HCl	0,025
	D-Calcium pantothenate	0,01	Riboflavin	0,01
	Choline chloride	0,50	DL-α-Tocopherol phosphate-Na_2	0,01
	Folic acid	0,01	Thiamine x HCl	0,01
	myo-Inositol	0,05	Vitamin A acetate	0,14
	Menadione	0,01		

Medium 199 with Hank's Salts

Liquid Media

M199 with HBSS without L-Glutamine with 0,35 g/l $NaHCO_3$	500 ml	P04-07753	M199 with HBSS with L-Glutamine with 25 mM Hepes with 0,35 g/l $NaHCO_3$	500 ml	P04-07450
M199 with HBSS with L-Glutamine with 0,35 g/l $NaHCO_3$	500 ml	P04-07350			

PAN™ BIOTECH GmbH

Each formulation possible

Medium 199 with Hank's Salts

Special Media

Minimum order quantity: 20 x 500 ml

M199 with HBSS **(10x)** without L-Glutamine without $NaHCO_3$	500 ml	P04-07600

Powder Media

M199 with HBSS with L-Glutamine without $NaHCO_3$	10 L 50 L	P03-2110 P03-2150	M199 with HBSS with L-Glutamine with 25 mM Hepes without $NaHCO_3$	10 L 50 L	P03-2210 P03-2250

Composition

	Components	mg/L	Components	mg/L
Inorganic Salts	Calcium chloride x $2H_2O$	185,44	Sodium acetate x $3H_2O$	83,00
	Iron(III) nitrate x $9H_2O$	0,72	Sodium chloride	8000,00
	Magnesium sulfate dried	139,68	di-Sodium hydrogen phosphate	47,68
	Potassium chloride	400,00		
Other Components	Adenine sulfate	10,00	Hepes	5958,00
	AMP	0,20	Hypoxanthine	0,30
	ATP	1,00	Phenol red	10,00
	Cholesterol	0,20	D-Ribose	0,50
	2' -Deoxyribose	0,50	Thymine	0,30
	D(+)-Glucose anhydrous	1000,00	Tween 80	4,90
	Glutathione (red.)	0,05	Uracil	0,30
	Guanine x HCl	0,30	Xanthine	0,30
Amino acids	L-Alanine	25,00	L-Leucine	60,00
	L-Arginine x HCl	70,00	L-Lysine x HCl	70,00
	L-Aspartic acid	30,00	L-Methionine	15,00
	L-Cysteine x HCl x H_2O	0,10	L-Phenylalanine	25,00
	L-Cystine	20,00	L-Proline	40,00
	L-Glutamine	100,00	L-Serine	25,00
	L-Glutamic acid	67,00	L-Threonine	30,00
	Glycine	50,00	L-Tryptophan	10,00
	L-Histidine x HCl x H_2O	21,88	L-Tyrosine	40,00
	L-Hydroxyproline	10,00	L-Valine	25,00
	L-Isoleucine	20,00		
Vitamins	p-Aminobenzoic acid	0,05	Nicotinic acid	0,025
	Ascorbic acid	0,05	Nicotinamide	0,025
	D(+)-Biotin	0,01	Pyridoxal x HCl	0,025
	Calciferol	0,10	Pyridoxol x HCl	0,025
	D-Calcium pantothenate	0,01	Riboflavin	0,01
	Choline chloride	0,50	DL-α-Tocopherol phosphate-Na_2	0,01
	Folic acid	0,01	Thiamine x HCl	0,01
	myo-Inositol	0,05	Vitamin A acetate	0,14
	Menadione	0,01		

When 5958,00 mg/l Hepes are included there are only 7500,00 mg /l Sodium chloride.

Each formulation possible

MEM with Earle's Salts

Description

MEM is an advancement of the BME and the base of many modifications. Because BME didn´t passed all requirements of some mammalian and HeLa cells, a better variation had to be developed.

Today MEM is one of the most used synthetic medium and shows its versatility by supplementing with amino acids including Hank´s or Earle´s salts. Even small amounts of FBS have a positive effect on the growth.

Liquid Media without Glutamine

MEM Eagle with EBSS without L-Glutamine without $NaHCO_3$	500 ml	P04-09050
MEM Eagle with EBSS without L-Glutamine with 2,2 g/l $NaHCO_3$	500 ml	P04-08050
MEM Eagle with EBSS without L-Glutamine without Phenol red with 2,2 g/l $NaHCO_3$	500 ml	P04-00507
MEM Eagle with EBSS without L-Glutamine with 25 mM Hepes with 2,2 g/l $NaHCO_3$	500 ml	P04-08150
MEM Eagle with EBSS without L-Glutamine with NEAA with 2,2 g/l $NaHCO_3$	500 ml	P04-08509

Special Media without Glutamine

Minimum order quantity: 20 x 500 ml

MEM Eagle with EBSS without L-Glutamine **with D-Valine** with 2,2 g/l $NaHCO_3$	500 ml	P04-08055
OPTIPAN MEM Eagle with EBSS without L-Glutamine with 2,2 g/l $NaHCO_3$	500 ml	P04-08502

Powder Media without Glutamine

MEM Eagle with EBSS without L-Glutamine without $NaHCO_3$	10 L 50 L	P03-7410 P03-7450

Liquid Media with L-Glutamine

MEM Eagle with EBSS with L-Glutamine with 2,2 g/l $NaHCO_3$	500 ml	P04-08500
MEM Eagle with EBSS with L-Glutamine **with 1,5 g/l $NaHCO_3$**	500 ml	P04-00509
MEM Eagle with EBSS with L-Glutamine without Phenol red **with 1,5 g/l $NaHCO_3$**	500 ml	P04-00508
MEM Eagle with EBSS with L-Glutamine with 20 mM Hepes with 2,2 g/l $NaHCO_3$	500 ml	P04-08549
MEM Eagle with EBSS with L-Glutamine with NEAA with 2,2 g/l $NaHCO_3$	500 ml	P04-08510
OPTIPAN MEM Eagle with EBSS with L-Glutamine with 2,2 g/l $NaHCO_3$	500 ml	P04-08501

Each formulation possible

MEM with Earle's Salts

Special Media with L-Glutamine

Minimum order quantity: 20 x 500 ml

MEM Eagle with EBSS with L-Glutamine **without Glucose** with 2,2 g/l $NaHCO_3$	500 ml	P04-08520	MEM Eagle with EBSS **(2x)** with L-Glutamine with 25 mM Hepes with 2,2 g/l $NaHCO_3$	500 ml	P04-08151
MEM Eagle with EBSS **with 2 mM Glutamine** **with 1 mM Pyruvate** **with NEAA** **with 1,5 g/l $NaHCO_3$**	500 ml	P04-08056			

Powder Media with L-Glutamine

MEM Eagle with EBSS with L-Glutamine **with NEAA** without $NaHCO_3$	10 L 50 L	P03-2910 P03-2950	MEM Eagle with EBSS with L-Glutamine without $NaHCO_3$	10 L 50 L	P03-2710 P03-2750
MEM Eagle with EBSS with L-Glutamine **with NEAA** with 25 mM Hepes with $NaHCO_3$	10 L 50 L	P03-3010 P03-3050	MEM Eagle with EBSS with L-Glutamine with 25 mM Hepes without $NaHCO_3$	10 L 50 L	P03-2810 P03-2850

Liquid Media with stab. Glutamine

MEM Eagle with EBSS with stab. Glutamine with 2,2 g/l $NaHCO_3$	500 ml	P04-09500	MEM Eagle with EBSS with stab. Glutamine with 25 mM Hepes with 2,2 g/l $NaHCO_3$	500 nl	P04-08250

Schedule for MEM EBSS without Glutamine

	L-Glutamine	Stab. Glutamine	NEAA	Phenolred	Hepes	Special
09050				X		See above
08050				X		
00507						
08150				X	25 mM	
08509			X	X		
08502				X		See above
08055				X		See above

Each formulation possible

MEM with Earle's Salts

Schedule for MEM EBSS with L-Glutamine

	L-Glutamine	Stab. Glutamine	NEAA	Phenolred	Hepes	Special
08500	X			X		
00509	X			X		See above
00508	X			X		See above
08549	X			X	20 mM	
08151	X			X	25 mM	See above
08510	X		X	X		
08501	X			X		
08520	X			X		See above
08056	X		X	X		See above

Schedule for MEM EBSS with stab. Glutamine

	L-Glutamine	Stab. Glutamine	NEAA	Phenolred	Hepes	Special
09500		X		X		
08250		X		X	25 mM	

3

Composition

	Components	mg/L	Components	mg/L
Inorganic Salts	Calcium chloride x $2H_2O$	294,92	Sodium chloride	6800,00
	Magnesium sulfate dried	139,52	di-Sodium hydrogen phosphate x H_2O	140,00
	Potassium chloride	400,00		
Other Components	D(+)-Galactose anhydrous	1000,00	Phenol red	10,00
	Hepes	5958,00		
Amino acids	L-Alanine	8,90	L-Leucine	52,00
	L-Arginine x HCl	126,00	L-Lysine x HCl	72,50
	L-Asparagine x H_2O	13,20	L-Methionine	15,00
	L-Aspartic acid	13,30	L-Phenylalanine	32,00
	L-Cysteine	24,00	L-Proline	11,50
	L-Glutamine	292,00	L-Serine	10,50
	L-Glutamic acid	14,70	L-Threonine	48,00
	Glycine	7,50	L-Tryptophan	10,00
	L-Histidine x HCl x H_2O	42,00	L-Tyrosine	36,00
	L-Isoleucine	52,00	L-Valine	46,00
Vitamins	D-Calcium pantothenate	1,00	Nicotinamide	1,00
	Choline chloride	1,00	Pyridoxol x HCl	1,00
	Folic acid	1,00	Riboflavin	0,10
	myo-Inositol	2,00	Thiamine x HCl	1,00

When 5958,00 mg/l Hepes are included there are only 6300,00 mg/l Sodium chloride.

MEM with Hank's Salts

Liquid Media

MEM Eagle with HBSS without L-Glutamine with 0,35 g/l $NaHCO_3$	500 ml	P04-10050
MEM Eagle with HBSS with L-Glutamine with 0,35 g/l $NaHCO_3$	500 ml	P04-10500
MEM Eagle with HBSS with stab. Glutamine **without $NaHCO_3$**	500 ml	P04-11500
MEM Eagle with HBSS with L-Glutamine **with 0,60 g/l $NaHCO_3$**	500 ml	P04-10599

Powder Media

MEM Eagle with HBSS without L-Glutamine without $NaHCO_3$	10 L 50 L	P03-8110 P03-8150
MEM Eagle with HBSS with L-Glutamine without $NaHCO_3$	10 L 50 L	P03-3310 P03-3350

Composition

	Components	mg/L
Inorganic Salts	Calcium chloride x $2H_2O$	185,44
	Potassium chloride	400,00
	Potassium dihydrogen phosphate anhydrous	60,00
	Magnesium sulfate dried	139,52
	Sodium chloride	8000,00
	di-Sodium hydrogen phosphate	47,88
Other Components	D(+)-Glucose anhydrous	1000,00
	Hepes	5958,00
	Phenol red	10,00
Amino acids	L-Alanine	8,90
	L-Argininex HCl	126,00
	L-Asparaginex H_2O	13,20
	L-Aspartic acid	13,30
	L-Cystine	24,00
	L-Glutamine	292,00
	L-Glutamic acid	14,70
	Glycine	7,50
	L-Histidinex HCl x H_2O	42,00
	L-Isoleucine	52,00
	L-Leucine	52,00
	L-Lysinex HCl	72,50
	L-Methionine	15,00
	L-Phenylalanine	32,00
	L-Proline	11,50
	L-Serine	10,50
	L-Threonine	48,00
	L-Tryptophan	10,00
	L-Tyrosine	36,00
	L-Valine	46,00
Vitamins	D-Calcium pantothenate	1,00
	Cholin chloride	1,00
	Folic acid	1,00
	i-Inositol	2,00
	Nicotinamide	1,00
	Pyridoxal x HCl	1,00
	Riboflavin	0,10
	Thiaminex HCl	1,00

When 5958,00 mg/l Hepes are included there are only 7500,00 mg/l Sodium chloride.

RPMI 1640

Description

The medium was developed for culture of normal and neoplastic leucocytes, but also marrow cells and hybridoma. Meanwhile there are better, serumfree media for hybridoma like our Panserin H4000.

Just by supplementing the RPMI with different amounts of FBS it is a very good medium for many different cell lines.

Each formulation possible

RPMI 1640

Liquid Media without Glutamine

RPMI 1640 without L-Glutamine with 2,0 g/l $NaHCO_3$	500 ml	P04-17500
RPMI 1640 without L-Glutamine without Phenol red with 2,0 g/l $NaHCO_3$	500 ml	P04-16516
RPMI 1640 without L-Glutamine with 25 mM Hepes with 2,0 g/l $NaHCO_3$	500 ml	P04-18000
RPMI 1640 **(10x)** without L-Glutamine **without $NaHCO_3$**	500 ml	P04-17510
RPMI 1640 without L-Glutamine with 25 mM Hepes **without $NaHCO_3$**	500 ml	P04-17850
RPMI 1640 without L-Glutamine with 25 mM Hepes **with 2,2 g/l $NaHCO_3$**	500 ml	P04-22500
RPMI 1640 without L-Glutamine with 20 mM Hepes **with 0,85 g/l $NaHCO_3$**	500 ml	P04-19500

Special Media without Glutamine

Minimum order quantity: 20 x 500 ml

RPMI 1640 without L-Glutamine with 20 mM Hepes **without $NaHCO_3$**	500 ml	P04-19056
RPMI 1640 without L-Glutamine **without Calcium** with 2,0 g/l $NaHCO_3$	500 ml	P04-16151
RPMI 1460 without L-Glutamine **without L-Tryptophan** with 2,0 g/l $NaHCO_3$	500 ml	P04-17599
RPMI 1640 without L-Glutamine **without Glucose** with 2,0 g/l $NaHCO_3$	500 ml	P04-17550
RPMI 1640 without L-Glutamine with 15 mM Hepes **without Phosphate** with 2,0 g/l $NaHCO_3$	500 ml	P04-21049

Powder Media without Glutamine

RPMI 1640 without L-Glutamine without $NaHCO_3$	10 L 50 L	P03-7210 P03-7250
RPMI 1640 without L-Glutamine without Phenol red without $NaHCO_3$	10 L 50 L	P03-7710 P03-7750
RPMI 1640 without L-Glutamine with 25 mM Hepes without $NaHCO_3$	10 L 50 L	P03-4410 P03-4450

RPMI 1640

Liquid Media with L-Glutamine

RPMI 1640 with L-Glutamine with 2,0 g/l $NaHCO_3$	500 ml	P04-16500
RPMI 1640 with L-Glutamine without Phenol red with 2,0 g/l $NaHCO_3$	500 ml	P04-16515
RPMI 1640 **with 2 mM L-Glutamine** **with 1 mM Sodium pyruvate** **with 4,5 g/l Glucose** with 10 mM Hepes **with 1,5 g/l $NaHCO_3$**	500 ml	P04-18047
RPMI 1640 with L-Glutamine with 25 mM Hepes **with 2,2 g/l $NaHCO_3$**	500 ml	P04-22100
RPMI 1640 with L-Glutamine with 20 mM Hepes **with 0,85 g/l $NaHCO_3$**	500 ml	P04-19550
RPMI 1640 with L-Glutamine with 25 mM Hepes with 2,0 g/l $NaHCO_3$	500 ml	P04-22550

Special Media with L-Glutamine

Minimum order quantity: 20 x 500 ml

RPMI 1640 with L-Glutamine **with 110 mg/l Pyruvate** with 2,0 g/l $NaHCO_3$	500 ml	P04-16190
RPMI 1640 with L-Glutamine **without Glucose** with 2,0 g/l $NaHCO_3$	500 ml	P04-17545
RPMI 1640 with L-Glutamine **without L-Arginine** with 2,0 g/l $NaHCO_3$	500 ml	P04-16598
RPMI 1640 with L-Glutamine **without L-Tryptophan** with 2,0 g/l $NaHCO_3$	500 ml	P04-17598

Powder Media with L-Glutamine

RPMI 1640 with L-Glutamine without $NaHCO_3$	10 L 50 L	P03-4310 P03-4350
RPMI 1640 with L-Glutamine without Phenol red without $NaHCO_3$	10 L 50 L	P03-7610 P03-7650
RPMI 1640 with L-Glutamine with 25 mM Hepes without $NaHCO_3$	10 L 50 L	P03-7310 P03-7350

Liquid Media with stab. Glutamine

RPMI 1640 with stab. Glutamine with 2,0 g/l $NaHCO_3$	500 ml	P04-18500
RPMI 1640 with stab. L-Glutamine without Phenol red with 2,0 g/l $NaHCO_3$	500 ml	P04-16520
RPMI 1640 with stab. Glutamine with 25 mM Hepes with 2,2 g/l $NaHCO_3$	500 ml	P04-18050

Each formulation possible

RPMI 1640

Special Media with stab. Glutamine

Minimum order quantity: 20 x 500 ml

RPMI 1640 with stab. Glutamine without Glucose with 2,0 g/l $NaHCO_3$	500 ml	P04-17546
RPMI 1640 with stab. Glutamine without Phenol red without Glucose with 2,0 g/l $NaHCO_3$	500 ml	P04-16530

Composition

	Components	mg/L	Components	mg/L
Inorganic Salts	Calcium nitrate x $4H_2O$	100,00	Sodium chloride	6000,00
	Potassium chloride	400,00	di-Sodium hydrogen phosphate	800,49
	Magnesium sulfate anhydrous	48,84		
Other Components	D(+)-Glucose anhydrous	2000,00	Hepes	5958,00
	Glutathion (red.)	1,00	Phenol red	5,00
Amino acids	L-Arginine x HCl	241,86	L-Leucine	50,00
	L-Asparagine x H_2O	50,00	L-Lysine x HCl	40,00
	L-Aspartic acid	20,00	L-Methionine	15,00
	L-Cystine x 2HCl	65,19	L-Phenylalanine	15,00
	L-Glutamine	300,00	L-Proline	20,00
	L-Glutamic acid	20,00	L-Serine	30,00
	Glycine	10,00	L-Threonine	20,00
	L-Histidine x HCl x H_2O	20,27	L-Tryptophan	5,00
	L-Hydroxyproline	20,00	L-Tyrosine x 2Na	28,83
	L-Isoleucine	50,00	L-Valine	20,00
Vitamins	p-Aminobenzoic acid	1,00	Nicotinamide	1,00
	D-(+)-Biotin	0,20	Pyridoxol x HCl	1,00
	D-Calcium pantothenate	0,25	Riboflavin	0,20
	Choline chloride	3,00	Thiaminex HCl	1,00
	Folic acid	1,00	Vitamin B_{12}	0,005
	myo-Inositol	35,00		

When 5958,00 mg/l Hepes are included there are only 5000,00 mg /l Sodium chloride.

Schedule for RPMI without Glutamine

	L-Glutamine	Stab. Glutamine	Sodium pyruvate	Phenolred	Hepes	Special
17500				X		
16516						
18000				X	25 mM	
17510				X		See above
17850				X	25 mM	See above
22500				X	25 mM	See above
19056				X	20 mM	See above
19500				X	20 mM	See above
16151				X		See above
17599				X		See above
17550				X		See above
21049				X	15 mM	See above

PAN™ BIOTECH GmbH

Each formulation possible

RPMI 1640

Schedule for RPMI with L-Glutamine

16500	X			X		
16515	X					
18047	X		X	X	10 mM	See above
22100	X			X	25 mM	See above
19550	X			X	20 mM	See above
16190	X		X	X		See above
17545	X			X		See above
16598	X			X		See above
17598	X			X		See above

Schedule for RPMI with stab. Glutamine

18500		X		X		
16520		X				
18050		X		X	25 mM	See above
17546		X		X		See above
16530		X				See above

Schneider's Drosophila Medium

Description

Originally developed for the culture of Drosophila, but it is also suitable for culture of other dipteran cell lines.

Liquid Media

Schneider's Drosophila Medium without L-Glutamine with 0,40 g/l $NaHCO_3$	500 ml	P04-90500
Schneider's Drosophila Medium with L-Glutamine with 0,40 g/l $NaHCO_3$	500 ml	P04-91500

Powder Media

Schneider's Drosophila Medium without L-Glutamine without $NaHCO_3$ Calcium chloride separate	10 L 50 L	P03-9310 P03-9350
Schneider's Drosophila Medium with L-Glutamine without $NaHCO_3$ Calcium chloride separate	10 L 50 L	P03-9410 P03-9450

Schneider's Drosophila Medium

Composition

	Components	mg/L	Components	mg/L
Inorganic Salts	Potassium chloride	1600,00	Magnesium sulfate dried	2585,71
	Potassium dihydrogen phosphate	450,00	Sodium chloride	2100,00
	Calcium chloride	600,00	di-Sodium hydrogen phosphate	700,00
Other Components	DL-Malic acid	600,00	Yeast extract	2000,00
	Succinic acid	60,00	α-Ketoglutaric acid sodium salt	402,66
	Fumaric acid	60,00	D(+)-Trehalose x $2H_2O$	2210,00
	D(+)-Glucose anhydrous	2000,00	β-Alanine	500,00
Amino acids	β-Alanine	500,00	L-Leucine	150,00
	L-Arginine Base	600,00	L-Lysine x HCl	1650,00
	L-Asparatic acid	400,00	L-Methionine	150,00
	L-Cysteine free base	60,00	L-Proline	1700,00
	L-Cystine	16,60	L-Serine	250,00
	L-Glutamine	1800,00	L-Threonine	350,00
	L-Glutamic acid	800,00	L-Tryptophan	100,00
	Glycine	250,00	L-Tyrosine	500,00
	L-Histidine Base	400,00	L-Valine	300,00
	L-Isoleucine	150,00		

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TC 100 Insect Cell Medium

Description

The TC 100 insect cell medium is an absolutely serumfree formula (Oxford formulation) for the growth of insect cells, especially for SF9 cells and the breeding of viruses.

If you would like to work with a modern proteinfree insect medium, our SPODOPAN is the ideal choice.

Liquid Media

TC 100 Insect Medium without L-Glutamine with 0,35 g/l $NaHCO_3$	500 ml	P04-93500
TC 100 Insect Medium with L-Glutamine with 0,35 g/l $NaHCO_3$	500 ml	P04-92500

Powder Media

TC 100 Insect Medium without L-Glutamine without $NaHCO_3$	10 L 50 L	P03-9510 P03-9550
TC 100 Insect Medium with L-Glutamine without $NaHCO_3$	10 L 50 L	P03-9610 P03-9650

TC 100 Insect Cell Medium

Composition

	Components	mg/L	Components	mg/L
Inorganic Salts	Calcium chloride x $2H_2O$	1298,13	Magnesium sulfate dried	1957,14
	Potassium chloride	2900,00	Sodium dihydrogen phosphate x H_2O	970,00
	Magnesium chloride x $6H_2O$	2282,59		
Other Components	D(+)-Glucose anhydrous	1000,00	Bacto - Tryptose	2600,00
Amino acids	L-Alanine	225,00	L-Leucine	75,00
	L-Arginine Base	550,00	L-Lysine x HCl	630,00
	L-Aspartic acid	350,00	L-Methionine	50,00
	L-Asparagine x H_2O	391,97	L-Phenylalanine	150,00
	L-Cystine	20,00	L-Proline	350,00
	L-Glutamine	600,00	L-Serine	550,00
	L-Glutamic acid	600,00	L-Threonine	180,00
	Glycine	650,00	L-Tryptophan	100,00
	L-Histidine x HCl x H_2O	3400,00	L-Tyrosine	55,00
	L-Isoleucine	50,00	L-Valine	100,00
Vitamins	p - Aminobenzoesäure	0,02	Nicotin acid	0,02
	D-(+)-Biotin	0,01	Pyridoxol x HCl	0,02
	D-Calcium pantothenate	0,11	Riboflavin	0,02
	Folic acid	0,02	Thiamine x HCl	0,02
	myo-Inositol	0,02	Vitamin B_{12}	0,01

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TNM-FH Medium

Description

The TNM-FH is a variation of the Grace medium. This modification, if correctly supplemented, has proved as a good culture media for many lepidopteran cells.

Liquid Media

TNM-FH Medium — 500 ml — P04-86500
without L-Glutamine
with Lactalbumine-Hydrolysate
with Yeast Extract
with 0,35 g/l $NaHCO_3$

TNM-FH Medium — 500 ml — P04-80500
with L-Glutamine
with Lactalbumine-Hydrolysate
with Yeast extract
with 0,35 g/l $NaHCO_3$

Special Media

Minimum order quantity: 20 x 500 ml

TNM-FH Medium — 500 ml — P04-83500
with L-Glutamine
with Lactalbumin-Hydrolysate
with Yeast extract
with 10 % Foetal Bovine Serum
with 0,35 g/l $NaHCO_3$

Powder Media

TNM-FH Insect Medium — 10 L — P03-9710
without L-Glutamine — 50 L — P03-9750
with Lactalbumine-Hydrolysate
with Yeast extract
without $NaHCO_3$

Each formulation possible

PAN™ BIOTECH GmbH

TNM-FH Medium

Composition

	Components	mg/L	Components	mg/L
Inorganic Salts	Calcium chloride x $2H_2O$	1324,62	Magnesium sulfate dried	1765,23
	Potassium chloride	2240,00	di-Sodium hydrogen phosphate	876,92
	Magnesium chloride x $6H_2O$	2278,86		
Other Components	DL-Malic acid	670,00	Yeast extract	3333,33
	Succinic acid	60,00	α-Ketoglutaric acid sodium salt	425,66
	D-Fructose	400,00	Lactalbumin Hydrolysate	3333,33
	Fumaric acid	55,00	Sucrose	26680,00
	D(+)-Glucose anhydrous	700,00		
Amino acids	β-Alanine	200,00	L-Leucine	75,00
	L-Alanine	225,00	L-Lysine x HCl	625,00
	L-Argininex HCl	700,00	L-Methionine	50,00
	L-Asparaginex H_2O	350,00	L-Phenylalanine	150,00
	L-Aspartic acid	350,00	L-Proline	350,00
	L-Cystine	19,18	L-Serine	550,00
	L-Glutamine	600,00	L-Threonine	175,00
	L-Glutamic acid	600,00	L-Tryptophan	100,00
	Glycine	650,00	L-Tyrosine	50,00
	L-Histidine Base	2500,00	L-Valine	100,00
	L-Isoleucine	50,00		
Vitamins	p-Aminobenzoic acid	0,02	myo-Inositol	0,02
	D-(+)-Biotin	0,01	Nicotinic acid	0,02
	D-Ca-Pantothenate	0,02	Pyridoxol x HCl	0,02
	Cholin chloride	0,20	Riboflavin	0,02
	Folic acid	0,02	Thiamine x HCl	0,02

Waymouth‘s MB 752/1 Medium

Description

The Waymouth‘s MB 752/1 media was developed for studies concerning nutrition and metabolism. It also can be used for growing strain L sublines, NCTC clone 929.

Powder Media

Waymouth’s MB 752/1 Medium with L-Glutamine without $NaHCO_3$	10 L	P03-4510
	50 L	P03-4550

Liquid Media

Waymouth’s MB 752/1 Medium with L-Glutamine with 2,24 g/l $NaHCO_3$	500 ml	P04-28500

Waymouth‘s MB 752/1 Medium

Composition

	Components	mg/L	Components	mg/L
Inorganic Salts	Calcium chloride x $2H_2O$	120,00	Potassium dihydrogen phosphate	80,00
	Magnesium chloride x $6H_2O$	240,00	Sodium chloride	6000,00
	Magnesium sulfate dried	130,96	di-Sodium hydrogen phosphate anhydrous	300,00
	Potassium chloride	150,00		
Other Components	D(+)-Glucose anhydrous	5000,00	Hypoxanthine	25,00
	Glutathione (red.)	15,00	Phenol red	10,00
	Hepes	4766,40		
Amino acids	L-Arginine x HCl	75,00	L-Leucine	50,00
	L-Aspartic acid	60,00	L-Lysine x HCl	240,00
	L-Cysteine x HCl x H_2O	100,26	L-Methionine	50,00
	L-Cystine	15,00	L-Phenylalanine	50,00
	L-Glutamine	350,00	L-Proline	50,00
	L-Glutamic acid	150,00	L-Threonine	75,00
	Glycine	50,00	L-Tryptophan	40,00
	L-Histidine x HCl x H_2O	164,10	L-Tyrosine	40,00
	L-Isoleucine	25,00	L-Valine	65,00
Vitamins	L-Ascorbic acid	17,50	Nicotinamide	1,00
	D(+)-Biotin	0,02	Pyridoxol x HCl	1,00
	D-Calcium pantothenate	1,00	Riboflavin	1,00
	Choline chloride	250,00	Thiamine x HCl	10,00
	Folic acid	0,40	Vitamin B_{12}	0,20
	myo-Inositol	1,00		

When 5958,00 mg/l Hepes are included there are only 5500,00 mg /l Sodium chloride.

William‘s Medium E

Description

The William‘s medium E is used for long-term cultivation of adult rat liver epithelial cells.

Liquid Media

William’s Medium E without L-Glutamine with 2,24 g/l $NaHCO_3$	500 ml	P04-29050	William’s Medium E with stab. Glutamine with 2,24 g/l $NaHCO_3$	500 ml	P04-29150
William’s Medium E with L-Glutamine with 2,24 g/l $NaHCO_3$	500 ml	P04-29500	William’s Medium E without L-Glutamine without Phenol red with 2,24 g/l $NaHCO_3$	500 ml	P04-29510

Each formulation possible

William‘s Medium E

Special Media with stab. Glutamine

Minimum order quantity: 20 x 500 ml

William’s Medium E without L-Glutamine **without Glucose** with 2,24 g/l $NaHCO_3$	500 ml	P04-29050S1

Powder Media

William’s Medium E with L-Glutamine without $NaHCO_3$	10 L 50 L	P03-4710 P03-4750
William’s Medium E with L-Glutamine with 25 mM Hepes without $NaHCO_3$	10 L 50 L	P03-4810 P03-4850

Composition

	Components	mg/L	Components	mg/L
Inorganic Salts	Calcium chloride x $2H_2O$	264,92	Manganese chloride x $4H_2O$	0,0001
	Iron(III)-nitrat x $9H_2O$	0,0001	Sodium chloride	6800,00
	Potassium chloride	400,00	Sodium dihydrogen phosphate x H_2O	140,00
	Copper(II)-sulfate x $5H_2O$	0,0001	Zinc sulfate x $7H_2O$	0,0002
	Magnesium sulfate dried	139,57		
Other Components	D(+)-Glucose anhydrous	2000,00	Methyllinoleat	0,03
	Hepes	5958,00	Sodium pyruvate	25,00
	Glutathion (red.)	0,05	Phenol red	10,00
Amino acids	L-Alanine	90,00	L-Leucine	75,00
	L-Arginine free base	50,00	L-Lysine x HCl	87,50
	L-Asparagine x H_2O	20,00	L-Methionine	15,00
	L-Aspartic acid	30,00	L-Phenylalanine	25,00
	L-Cysteine	40,00	L-Proline	30,00
	L-Cystine	20,00	L-Serine	10,00
	L-Glutamine	292,00	L-Threonine	40,00
	L-Glutamic acid	50,00	L-Tryptophan	10,00
	Glycine	50,00	L-Tyrosine	35,00
	L-Histidine Base	15,00	L-Valine	50,00
	L-Isoleucine	50,00		
Vitamins	L-Ascorbic acid	2,00	Nikotinamid	1,00
	D(+)-Biotin	0,50	Pyridoxal x HCl	1,00
	Calciferol	0,10	Riboflavin	0,1
	D-Calcium pantothenate	1,00	Thiamine x HCl	1,00
	Choline chloride	1,50	DL-α-Tocopherol phosphate-Na_2	0,01
	Folic acid	1,00	Vitamin A acetate	0,10
	myo-Inositol	2,00	Vitamin B_{12}	0,20
	Menadion sodium bisulfite	0,01		

When 5958,00 mg/l Hepes are included there are only 6300,00 mg /l Sodium chloride.

Schedule

	L-Glutamine	Stab. Glutamine	Sodium pyruvate	Phenolred	Special
29050			X	X	
29500	X		X	X	
29150		X	X	X	
29510			X		
29050S1			X	X	See above

Each formulation possible

ENDOPAN 3

Endothelial Cell Medium

Description

Endothelial cells line the blood and lymphatic vessels and the internal cavities of the heart. They display a strongly flattened, polygonal form and mostly rest on a basal membrane. They adhere to each other by desmosomes and tight-junctions.

With a total cell number of about one trillion (1012), the endothelium is one of the biggest organs of the body and plays a key role in many physiological and pathophysiological processes (e.g. cell-based immune response, wound healing, inflammation, allergy, cardiovascular diseases, tumour growth).

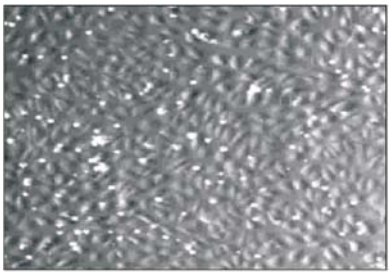
A huge number of soluble factors circulating in the blood or released by neighbouring cells, control proliferation or apoptosis of endothelial cells and the invasion and migration of leucocytes to the endothelium, thereby regulating the maintenance, degeneration, or regeneration of blood vessels.

Composition

ENDOPAN 3 *ready-to-use* is a specially developed medium for the in vitro culture of human endothelial cells containing all components necessary for optimal growth. It is designed for use in an incubator at 37 °C with a 5% CO_2 atmosphere.

ENDOPAN 3 *kit* is provided with FBS and supplements in separate sterile packing. This will enable the user to prepare a medium for special application. For example, FBS, VEGF, FGF-2, or other components may be omitted from the complete medium for specific experimental settings.

Sub-confluent HUVEC in ENDOPAN 3



Confluent HUVEC in ENDOPAN 3

ENDOPAN 3 ready-to-use	500 ml	P04-00100
ENDOPAN 3 kit with 9 supplements	500 ml	P04-0010K

Reagents

Collagen G solution 0.01 %	100 ml	P06-20350

ENDOPAN PRO

Description

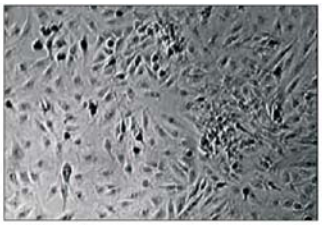
Endothelial cells line blood and lymphatic vessels and the internal cavities of the heart. They display a strongly flattened, polygonal form and mostly rest on a basal membrane. With a total number of about 1012 cells, the endothelium is one of the biggest organs of the body and plays a key role in many physiological and pathophysiological processes. A number of factors control proliferation or apoptosis of endothelial cells, thereby regulating the maintenance, degeneration, or regeneration of blood vessels. New blood vessel formation occurs via angiogenesis or vasculogenesis, a process thought to be restricted to embryonic development. In 1997, postnatal vasculogenesis has been proposed as an important mechanism for angiogenesis via blood or bone marrow derived circulating progenitor endothelial cells (PEC) (Asahara et al, Science 1997).

Consequently, PECs have been extensively studied as a potential cell therapy for the repair of damaged blood vessels. Animal studies clearly demonstrated that administration of PECs partially rescued cardiovascular dysfuntion or myocardial injury with evidence for PEC contribution to new vessel growth. In most studies, PECs are defined by cell surface expression of CD34, CD133, or VEGF-R2 (KDR). Because these molecules are also present on hematopoietic progenitors, relying only on surface markers can not exclude a contamination with hematopoietic linage cells. More recently, a PEC population has been identified which shows expression of endothelial as well as progenitor, but not hematopoietic cell markers (Ingram et al, Blood. 2004;104:2752). Importantly, these cells have been tested for a high proliferative potential in clonogenic assays and additionally characterized by formation of functional blood vessels in vivo (Yoder et al, Blood. 2007;109:1801).

Composition

ENDOPAN PRO is a complete medium specially developed for the in vitro culture of human progenitor endothelial cells (hPEC) containing all components necessary for optimal colony formation, clonogenic growth, and rapid proliferation.

ENDOPAN PRO kit is provided with FBS growth supplement (pre-screened and tested for progenitor cells) and additional supplements in separate sterile packing. This will enable the user to prepare a medium for special application.



hPEC colony (P1) with outgrowing cells in Endopan PRO

hPEC in Endopan PRO (P6)

ENDOPAN PRO ready-to-use	500 ml	P04-00700
ENDOPAN PRO kit with 6 supplements	500 ml	P04-0070K

HAEMANGIOPAN

Haemangioblast Medium

Description

The development of primary blood vessels from in situ differentiating haematopoetic stem cells is called vasculogenesis. The embryonic development of the vascular system starts with the formation of so-called blood islands which are produced under the influence of factors of the „Fibroblast Growth Factor“ (FGF) family from mesodermal cells of the yolk. These cells are called Haemangioblasts. They form the origin of the haematopoetic stem cells and the endothelial precursor cells, the angioblasts.

Composition

The haemangioblast medium from PAN-Biotech is a complete ready-for-use medium and provided with all necessary supplements (glutamine, growth factors, foetal bovine serum).

With a storage temperature of 4 °C it keeps for at least 6 months.

HAEMANGIOPAN	500 ml	P04-88000

HEPATOPAN

Human Hepatocyte Medium

Description

Like every human organ the liver consists of a complicated compound of different cells with different functions. Hepatocytes represent – in terms of figures – with 75 % of the total number of the liver cells the most important component.

The metabolism, that means the chemical transformation of almost all substances which are taken in by the body, takes place in the liver.

Composition

The hepatocyte medium from PAN-Biotech is supplied as a basic medium with four additional supplements (storage of the supplements at -20 °C).

The supplements must be added to the medium before use. The medium doesn’t contain foetal bovine serum.

HEPATOPAN with 4 supplements	500 ml	P04-00600

MELANOPAN
Melanozytes Medium

Description

Melanozytes are embedded in the basal and spike cell layer of the epidermis. They produce the pigment melanin and take care of the protective function of the skin against UV damages.

If the solar radiation is too strong the melanozytes are damaged and can develop into tumour cells.

Composition

The melanozyte growth medium from PAN-Biotech is supplied as a basic medium with seven different supplements (storage of the supplements at -20 °C).

The supplements must be added to the medium before use. The medium doesn't contain foetal bovine serum.

MELANOPAN with 7 supplements	500 ml	P04-740500

EHCPAN
EHC Medium

Description

EHC-medium is suitable for the culture of early haematopoetic cells in cytogenetic diagnostic (e. g. acute lymphatic leukaemia).

Composition

Basic medium completed with FBS and a mixture of growth factors. The supplement supplied is added to the basic medium shortly before use.

EHCPAN Kit Basal medium with Antibiotica/Antimycotica mix 20 ml with supplement A 25 x 1 ml	500 ml	P04-97100

NEUROPAN
Neuronal Cells Medium

Description

NEUROPAN Basal Medium
NEUROPAN Basalmedium supports the growth of hippocampus cells and many other neurons of the central nervous system. A feeder layer of astrocytes is not required. NEUROPAN Basalmedium does not contain glutamate which should be added for the initial culture (25 µM). Before use, the NEUROPAN Basalmedium must be supplemented with serum or in the case of a serumfree culture with NEUROPAN 27.

NEUROPAN 27
NEUROPAN 27 is a concentrate for the serumfree cultivation of neural cells in conjunction with NEUROPAN Basalmedium.

NEUROPAN
Neuronal Cells Medium

NEUROPAN-Basal Medium (Basismedium)	500 ml	P04-00900
NEUROPAN 27 supplement 20x	100 ml 10 ml	P07-07100 P07-07010
NEUROPAN 27 supplement 50x	100 ml 10 ml	P07-07200 P07-07210
NEUROPAN 27 supplement 20x with HSA	100 ml 10 ml	P07-09100 P07-09010
NEUROPAN 27 supplement 20x without Antioxidant	100 ml 10 ml	P07-10100 P07-10010
NEUROPAN 2 supplement 100x	100 ml 10 ml	P07-11100 P07-11010

STEMPAN
ES-Cell Medium

Description

Stem cells are non-specialized cells with the ability (potency) to develop into different cell types (e. g. heart, nerve, blood, muscle and cartilage cells). Stem cells are able to multiply without loosing their pluripotency and to develop into specialized, organ-specific cells.

Depending on their origin, they are divided into embryonic and adult stem cells. For the cultivation of embryonic stem cells PAN-Biotech has developed a complete ready-for-use medium. The medium contains foetal bovine serum.

STEMPAN DMEM with L-Glutamine with 3,7 g/l $NaHCO_3$ without LIF	500 ml	P08-50500
STEMPAN GMEM with L-Glutamine with 2,75 g/l $NaHCO_3$ without LIF	500 ml	P08-50600

EMEM Fibroblasts
Fibroblast Medium

Description

Based on EMEM this medium was supplemented with larger quantities of amino acids and vitamins and optimized for an improved growth for fibroblasts.

For the cultivation of fibroblasts, this medium must be supplemented with 10 % FBS before use.

EMEM Fibroblasts	500 ml	P04-08049

AMNIOPAN

Prenatal Cytogenetics Medium

Description

For prenatal cytogenetics
AMNIOPAN is a ready-for-use media for optimising the primary culture of foetal human cells from amniotic punctures and chorionic biopsies.

- Is ready-for-use and can be used immediately.
- Promotes fast attachment of cells.
- Guarantees fast growth.
- Provides excellent chromosome structures.
- Guarantees more metaphases than usual.
- Is speed combined with safety.
- Helps you to save valuable time that you would have to spend for batch testing or wait until chromosome analysis.
- In many cases surpasses the growth properties of analog compositions.
- Is available in liquid form, in 100 ml fillings.
- Is delivered in deep-frozen condition.
- Is to be stored at -20 °C.
- Thawing and re-freezing several times should be avoided.
- Can be stored for approx. 1 week at +4 °C.
- Can be stored for a longer time at -20 °C.
- Shelf life: 24 months.
- Contains FBS, glutamine, growth factors and gentamycin.

AMNIOPAN	100 ml	P04-70100

MARROWPAN

Marrow Cells Medium

Description

For bone marrow cells in tumor cytogenetics
MARROWPAN is a ready-for-use medium for optimising the culture of bone marrow cells from punctures.

- Is ready-for-use and can be used immediately.
- Guarantees fast growth.
- Provides excellent chromosome structures.
- Guarantees more metaphases than usual.
- Is speed combined with safety.
- Helps you to save valuable time that you would have to spend for batch testing or wait until chromosome analysis.
- In many cases surpasses the growth properties of analog compositions.
- Is available in liquid form, in 100 ml fillings.
- Is delivered in deep-frozen condition.
- Is to be stored at -20 °C.
- Thawing and re-freezing several times should be avoided.
- Can be stored for approx. 1 week at +4 °C.
- Can be stored for a longer time at -20 °C.
- Shelf life: 24 months.
- Contains FBS, glutamine, growth factors and gentamycin.

MARROWPAN	100 ml	P04-70200